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A Knowledge Assessment of Prescription Drug Use Among Student-Athletes at a Southeastern College

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I am submitting herewith a dissertation written by Marcus L. Amos entitled "A Knowledge Assessment of Prescription Drug Use Among Student-Athletes at a Southeastern College." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Kinesiology and Sport Studies.

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Marcus L. Amos

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DEDICATION

This dissertation is dedicated to my mother who lost her battle with cancer on June 2, 2015 at 11:30 p.m. To all of my family members who transitioned on to heaven during this process, your fond memories are cherished. I would also like to dedicate this accomplishment to my family and friends who have supported me throughout my efforts in obtaining this degree. I have also received tremendous support from several other family members and friends.

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ABSTRACT

This study examined prescription drug use at a small Division III college in the Southeast. Prescription drug use and misuse is a documented trend among college students. Medication therapy due to injuries is a common means of rehabilitation in sports. Because of this, there have been recent incidences documented in which student-athletes have become victims of accidental drug overdoses, and in some cases, have resulted in their death. In this study, areas examined were the awareness of the culture of prescription drug use among student-athletes, personal use of prescription drugs among student-athletes, and personal knowledge and awareness about prescription drug use among student-athletes. The purpose of this study was to examine whether student-athletes are educated about the high risk of addiction related to prescription drug abuse. The second purpose was to examine if student-athletes are aware of the potential health risks involved with combining mood-altering substances with prescription drugs. The third purpose was to examine whether stakeholders are aware of the standard care owed to student-athletes. The fourth purpose was to examine if prevention measures are in place to combat the potential for prescription drug misuse. The methods used in this study included an e-questionnaire that was administered to 100 student-athletes (75.0% response rate); 'elite interviews' with athletic department staff and the review of (N=2); and document reviews (N=3); and the key findings from this study included: 1) athletic department staff agreed that more prescription drug education and prevention could benefit student-athletes; and 2) differences in the level of awareness, and culture of prescription drug use among student-athletes.

Key Words: Opioids, Addiction, Student-Athlete Health &Well-being

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I: INTRODUCTION

Prescription drug abuse is the nation's fastest growing drug problem. More people in the U.S. died last year of drug overdoses than died in car accidents, making prescription drug abuse the third leading cause of accidental death. In the last 20 years, the consumption of prescription stimulants increased from 5 million a year to 45 million year. In the US, one person dies every 19 minutes from a drug overdose, and overdoses involving prescription painkillers now kill more Americans than those involving heroin and cocaine combined. This epidemic has been particularly widespread on college campuses (Clinton Foundation, 2014).

Scope of the Problem

According to the Substance Abuse and Mental Health Services Administration (SAMHSA), pharmaceutical products have been abused throughout the ages, and the current epidemic of prescription drug abuse in the United States represents the newest wave of a long-standing problem. The extent of the problem is staggering. National questionnaires show that in 2003, approximately 15 million Americans (ages 12 and older) used a psycho-therapeutic for a condition other than medical use" (SAMHSA, 2005, p.1).

This includes non-medical use of opioid analgesics, sedatives/tranquilizers and stimulant medications. Prescription drug misuse was second, after marijuana, in terms of prevalence among the illicit substances used by 12th graders, with prevalence between 2002 and 2004 ranging from 9% to 10% for Vicodin, 4 to 5% for OxyContin, 9 to 10% for amphetamine and 5% to 6% for Ritalin (Johnston, O'Malley, & Bachman, 2003). Particularly worrisome is the recent epidemiological data have shown that prescription drug abuse has increased significantly in the

past decade. Notably, the incidence of analgesic abuse increased from 628,000 in 1990 to 2.4 million in 2001 (SAMHSA, 2005).

The Center for Disease Control (2016a) conducted a study revealing the following:

> Drug overdose deaths and opioid-involved deaths continue to increase in the United States. The majority of drug overdose deaths (more than six out of ten) involve an opioid. Since 1999, the number of overdose deaths involving opioids (including prescription opioids and heroin) quadrupled. From 2000 to 2015 more than half a million people died from drug overdoses. Ninety-one Americans die every day from an opioid overdose. (p. 1).

We now know that overdoses from prescription opioids are a driving factor in the increase in opioid deaths over the last 15 years. Since 1999, the amount of prescription opioids sold in the U.S. nearly quadrupled, yet there has not been an overall change in the amount of pain that Americans report. Deaths from prescription opioids like oxycodone, hydrocodone, and methadone have also more than quadrupled since 1999 (CDC, 2016a).

Drug overdose deaths and opioid-involved deaths continue to increase in the United States. Deaths from drug overdose are up among both men and women, all races, and adults of nearly all ages. Overdoses involving opioids killed more than 28,000 people in 2014. Over half of those deaths were from prescription opioids (CDC, 2016b).

According to the National Institute on Drug Abuse (2016), the classes of prescription drugs most commonly abused is opioid pain relievers, such as Vicodin and OxyContin. The

National Institute on Drug Abuse (2016, para. 3) also found that people often think prescription and over the counter (OTC) drugs are safer than illicit drugs. However, they can be as addictive and dangerous, and can put users at risk for other adverse health effects, including overdose especially when taken with other drugs or alcohol.

The National Institute on Drug Abuse (2015) discussed prescription and OTC drugs that are abused in one or more of the following ways:

1. Taking a medication prescribed for somebody else. Unaware of the dangers of sharing medications, people often unknowingly contribute to this form of abuse by sharing their unused pain relievers with their family members (NIDA, 2015).
2. Taking a drug in a higher quantity or in another manner than prescribed. Most prescription drugs are dispensed orally in tablets, but abusers sometimes crush the tablets and snort or inject the powder. This hastens the entry of the drug into the bloodstream and the brain and amplifies its effects (NIDA, 2015).
3. Taking a drug for another purpose than prescribed. All of the drug types mentioned can produce pleasurable effects at sufficient quantities, so taking them for the purpose of getting high is one of the main reasons people abuse them (NIDA, 2015).

More than 2 million people in the United States suffer from substance abuse disorders related to prescription opioid pain relievers. The terrible consequences of this trend include overdose deaths, which have more than quadrupled in the past decade and a half. The causes are complex, but they include over-prescription of pain medications. In 2013, 207 million

prescriptions were written for prescription opioid pain medications (National Institute on Drug Abuse, 2015).

Medical and non-medical prescription drug abuse among college athletes has been become an epidemic. There are concerns about whether these usage behaviors are a result of a lack of education or are purposeful high-risk behaviors. Further, student-athletes suffer ongoing injuries throughout their careers that require them to engage in medication therapy as a part of their rehabilitative treatment. Ciocca, Strafford, and Laney (2011) found that athletes use a variety of substances for the treatment of pain, injury, and common illness, or to gain an advantage in competition. These substances include prescription medications. A growing concern is that many young athletes may use potentially dangerous, but legal, medications without consulting health professionals.

Early identification and education about drug abuse can have a significant impact on student-athletes, as discussed by the National Council on Patient Information and Education. Many college students and athletes say they began to misuse prescription drugs before starting college (National Council on Patient Information and Education, 2013). Thus, it is important to identify those who use prescription drugs, educate those who do not, and make use of treatment services and programs to combat the issue. It is also important for all students to know that not everyone takes prescription drugs for non-medical reasons (National Council on Patient Information and Education, 2013). Furthermore, Naylor, Garder, and Zaichowsky (2001) state that "many student athletes lack education on the topic" (p. 637). Their study determined that only 57% of athletes say their coaches addressed the issue of substance use and abuse. The

authors recommend that coaches and administrators assess the efficacy of their drug prevention programs and increase their efforts to enforce rules and regulations (Naylor et al., 2001, p. 637).

Purpose of Study

The focus of this study was to examine behaviors of student-athletes related to prescription drug use, and athletic staff awareness of preventive measures needed to address this problem. Upon conclusion of this study, the researcher will assess if additional preventive services and education addressing prescription drug education and awareness are needed. A small college in the Southeast was studied with the focus on expanding the limited research on prescription drug use among student-athletes. The study aimed to assess the knowledge of student-athletes, cultural acceptance, and overall prevalence of prescription drug use within college athletics. This study also examined the awareness of athletic staff related to preventive measures that address prescription drug use. Five key questions emerged that were critical in conducting this study: (1) are student-athletes educated about the high risk of addiction related to prescription drug abuse; (2) are student-athletes aware of the potential health risks involved with combining mood-altering substances with prescription drugs; (3) are stakeholders aware of the standard care available to student-athletes; (4) are stakeholders aware of the level of prescription drug use by student-athletes; and (5) are prevention measures in place to combat the potential for prescription drug misuse? Social Learning was used as a guide to assess why athletes use and misuse prescription drugs.

In recent years, scholarship has challenged users about their rationale for continued drug use as a means of adapting and coping with internal and external pressures (Life Process

Programs, n.d.). The internal pressures of prescription drug use are related to athletes dealing with injuries and the external pressures can be related to personal relationships with coaches, teammates and intimate relationships while trying to maintain their performance level as a student-athlete.

Deaths of Collegiate Athletes Resulting from Pill Addiction

Since 2011, some college sports programs have experienced tragic deaths of student-athletes because of accidental drug overdoses. Two unfortunate and untimely deaths include Aaron Douglas, a former football player from the University of Alabama, and Austin Box, a football star from the University of Oklahoma. Neither of the two universities were liable for the men's deaths, both of which related to the overuse of some form of painkiller and/or a combination of other prescription drugs.

Alabama Crimson Tide offensive tackle Aaron Douglas was found dead on the second floor balcony of a home in Fernandina Beach, Florida on May 12, 2011, after attending a vacation party (Low, 2011). According to Curtis (2011), Douglas had several drugs (methadone, diazepam, and carisoprodol) in his system at the time of his death; a subsequent autopsy ruled the death accidental, due to "multiple drug toxicity" (p. 1).

Oklahoma linebacker Austin Box had five prescription painkillers and an anti-anxiety drug in his system when he died, according to a preliminary toxicology report released July 10, 2012 by the state medical examiner's office. The death of 22-year-old Box on May 19, 2011 was ruled accidental. In the report, the agency said the combination of drugs likely caused pulmonary edema, or fluid in the lungs, and aspiration pneumonia, an inflammation of the lungs caused by

inhaling foreign substances. An autopsy revealed that the painkillers oxymorphone, morphine, hydrocodone, hydromorphone and oxycodone were in Box's system, along with the anti-anxiety drug Alprazolam. The report noted Box's significant medical conditions included cardiomegaly, or an enlarged heart, and a history of chronic pain (Austin Box Report, 2011).

The Epidemic of Prescription Painkiller Abuse

It is important to understand the seriousness behind the rise of painkiller use within athletics. A report produced Ulfers (2014) in the Center for Drug Free Sport and Research provided the following facts related to the use of painkillers by athletes:

- Athletes rely on painkillers in anticipation of pain. Also to avoid missing games or practices. Self-medication with non-prescription analgesics correlates with an athlete's lack of knowledge or concern for label recommendations (Ulfers, 2014).
- Research shows these athletes take higher than the recommended dose, and for more consecutive days than recommended. The use of prescription painkillers is prevalent and on the rise in athletic participation (Ulfers, 2014).
- Based on the current landscape of prescription opioid use in sports, including the knowledge and attitudes of athletes, there is a distinct need for education and policy reform (Ulfers, 2014).

The illicit use of prescription medications is not just a domestic concern. Zanchy, Bigelow, Compton, Foley, Inguchi, and Sannerud (2003) reported the following in their research:

> The non-medical use and abuse of pharmaceuticals (including prescription opioids) has been of long-lasting concern both domestically and internationally, and understanding the

> current patterns of abuse is essential for devising effective policies to prevent it. There are current organizations that support implementing drug policies. For over seven decades, the College on Problems of Drug Dependence (CPDD) has served a leadership role in the field of drug abuse. Its mission is to offer a scientific basis to guide drug abuse policy and practice. In 2001, CPDD commissioned a Taskforce on Prescription Opioid Abuse to craft a position statement to address several issues surrounding the non-medical use and abuse of prescription opioids (p. 217).

According to Juozapavicius, Latzke, & Rucker (2011),

> Austin Box's death was another casualty in Oklahoma, a state struggling with methamphetamine labs and drug problems. He was a heavily recruited athlete, a star since grade school, and had been a once-in-a-generation standout in his hometown, with a population of 48,000. Weeks after his death, an autopsy found that the painkillers oxymorphone, morphine, hydrocodone, hydromorphone, and oxycodone, and the anti-anxiety drug Alprazolam, were in his system and cited "mixed drug toxicity" as a probable cause of death. Investigators did not find any legal prescriptions on file for the drugs. (p. 1)

The answer, it seems, is that he was good at hiding a problem, and neither his parents nor anyone at Oklahoma could suggest a safety net that might have caught it" (p. 1). According to the NCAA student-athlete substance use study, student-athletes are using prescription pain medication more frequently with a prescription than without a prescription (NCAA, 2014a).

A study by Kolek (2006) discussed issues of institutions implementing a process to examine the use of prescription drugs by student-athletes. The focus of this study stated that:

> Given the frequency of students' prescription drug abuse, it is important for higher education institutions to investigate the extent and nature of prescription drug use among their students. At present, few studies of issue are available for student affairs and health administrators to draw on, in order to assess the potential needs for treatment and educational efforts, or to inform other campus policies, such as those pertaining to the dispensing of prescription drugs and campus policing. The increase in illicit prescription drug use has been attributed to two distinct phenomena. First, the changing national medical climate has resulted in increased prescriptions for many psychiatric drugs, including frequently abused stimulants. Second, students perceive illicit prescription drug use as qualitatively different from the use of other illegal drugs. (p. 20)

Pathology of Prescription Drug Use among Athletes

Athletes use a variety of substances for the treatment of pain, injury, common illnesses, or to gain an advantage in competition. These substances include prescription medications. A growing concern is that many young athletes may use potentially dangerous, but legal, medications without consulting health professionals (Ciocca, Strafford, & Laney, 2011).

Narconon (2017), recently published an article discussing the path that young athletes take that results in addiction, and the reasons they use painkillers. "For these others, addiction starts with prescription medications that are given to them by doctors. The young patient may not be properly instructed on their use and the doctor may not be fully educated on how to prevent

dependence on those drugs. After a few twists and turns, the young person winds up addicted even though recreational use was not part of the equation" (Narconon, 2017, para. 1). "When a young person is injured on the sports field or court, it is natural for a doctor to treat the pain as well as the injury. For a long time, this has meant sending the person home with a full bottle of pills when maybe a half dozen pills would do" (Narconon, 2017, para. 4).

There are additional reasons discussed by Farleman (2016) that addressed why student-athletes use prescription drugs:

> Student-athletes face excessive pressure related to academic and athletic life. These pressures are key factors that influence prescription misuse within the student-athlete experience. Stressors faced more often and to a greater degree than their peers include: time demands, sleep deprivation, relationships with coaches and scheduling missed class/exams. Other pressures stem from self-imposed and coaching expectations regarding academic and athletic performance. According to Mind, Body and Sport, an NCAA publication seeking to provide insight and support for student-athlete mental wellness, student-athletes appear to be less likely to seek help or receive mental health services when dealing with these stressors. (para. 1)

Research by Tricker (2000) found that 50% of all athletes studied reported they overuse painkillers. More than half of them obtained their painkillers from friends, teammates, or parents. These findings illustrate the strong motivating influence of an athlete's community, which may be integral to influencing the athlete to misuse drugs in order to cope with the discomfort of pain and injury. Approximately 25% of the athletes surveyed were unaware that sometimes serious

side effects can occur from using and abusing painkilling drugs. One third was unaware of the addictive potential of some painkilling drugs.

Topic Relevance

The concern for the health and safety of student-athletes is often heightened when there are cases of accidental drug overdoses among college athletics, and one drug overdose death is one too many. There must be an ongoing focus on providing student-athletes with awareness of the importance of prescription medication compliance. Optimally, more effective preventive measures can reduce criminal activity related to athletes' "doctor shopping" (seeking medications from multiple doctors), provide education on the proper use of prescription medications, and encourage more diversion control efforts by colleges and universities. The limited amount of information within the field of sports management regarding this topic indicates the need to move forward with additional research in this area.

Ongoing evaluation and research in this area is pertinent to college athletics, in order to assess and examine the educational resources regarding prescription drug use that is provided to student-athletes and athletic staff. The information discussed in this study also provides professionals who work in sports management insight into the behaviors, attitudes, and awareness of prescription drug use among student-athletes. This study can also bring attention to the field of sports management by continuing to improve programs and procedures currently in use that monitor the distribution of prescription drugs, and the education provided to student-athletes. Furthermore, ongoing dialogue between practitioners and researchers should continue in

order to address this issue. This will provide more education and awareness for all individuals involved with the well-being of student-athletes. Providing more education and literature in this area could be significant in identifying and examining the risks athletes take to remain on the field.

Relevance to Intercollegiate Athletics

This study can supplement the limited amount of research currently available on this topic. Moreover, it has the potential to heighten awareness about the problem of prescription drug abuse among student-athletes who participate in intercollegiate sports. The results of this research endeavor may also provide information to help athletic administrators develop effective prevention programs for drug addiction. Moreover, it can help to promote the concept of holistic care for student-athletes by identifying the high-risk substance abuse behaviors they display. The study could prompt additions to educational programs and curricula that specifically address substance abuse issues.

Positionality Statement

I have worked in the field of addiction for over 21 years and I am currently a Licensed and Certified Alcohol and Drug Counselor. My professional experience has allowed me the opportunity to provide treatment for adolescents and adults, within private and state rehabilitation facilities. I have specifically worked with athletes for the last 14 years. Traveling across the country during this time has afforded me the chance to meet with coaches, and athletic administrators who unfortunately have experienced the effects of student-athletes becoming

addicted to prescription drugs because of injuries and other personal, emotional, or physiological reasons.

This research effort is very important to me because of the unfortunate relationship I have had with parents whose sons or daughters have died from accidental drug overdoses. In 2014, I participated in a documentary entitled "*Locker-Room Addiction*." This documentary discussed testimonies of parents and families affected by this research topic, and addressing the epidemic of prescription drug addiction within athletics.

At the early stage of my involvement with educating student-athletes and athletic staff, I encountered a lot of resistance to addressing the issue of prescription drug abuse among student-athletes because of the stigma associated with this problem. The majority of the schools I contacted to examine their need for any education related to this topic all proposed the same concerns; (1) I hope you are not assuming that this is a problem at our institution, and (2) will you blame us for any athletes who are having problems with prescription drug addiction. Over the years, I have had to be very careful with my professional approach regarding the need to provide education related to prescription drug abuse because of the sensitivity of this addiction.

My personal goal is that colleges and universities will implement more effective prescription drug monitoring programs and increase clinical educational services outreach that addresses this topic. I have had the privilege of lecturing at sports camps all over the United States. Since 2003, when I first began researching and lecturing about the dangers of prescription drug use within athletics. I have never spoken at an athletic camp or college and not have an

athlete or staff approach me after to express that they have a family member, friend, or knowledge of another athlete who is dealing with this problem. This is why my passion for educating athletes continues to drive me within the field of sports management and life-skill development.

Definitions/Operational Terms

The following definitions are provided to give context to the discussion of pill addiction**.** *The Merriam Webster Medical Dictionary online* (2015) is the source of all definitions included in this section.

1. Analgesia: A neurologic or pharmacologic state in which painful stimuli are moderated such that, although still perceived, they are no longer painful.
2. Benzodiazepines: Medicines that help relieve nervousness, tension, and other symptoms by slowing the central nervous system.
3. Central Nervous System: One of the two main divisions of the nervous system, consisting of the brain and the spinal cord. The central nervous system processes information to and from the peripheral nervous system and is the main network of coordination and control for the entire body.
4. Co-ingestion: Taking two or more substances at the same time.
5. Counteractive Drugs: Drugs that act against (something): to cause (something) to have less of an effect or to have no effect at all.
6. Dependence: A state in which the organism functions normally only in the presence of the drug.

7. Drug Misuse: Drug abuse is the use of a medication without a prescription, in a way other than as prescribed, or for the experience or feelings elicited.
8. *DSM-V*: *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*) is the standard classification of mental disorders used by mental health professionals in the United States and contains a listing of diagnostic criteria for every psychiatric disorder recognized by the US healthcare system.
9. Epidemiological Data: Data obtained from the branch of medicine that deals with the study of the causes, distribution, and control of disease in populations.
10. Medical Morbidity: A diseased state or symptom.
11. Methylphenidate: A drug chemically related to amphetamine that acts as a mild stimulant of the central nervous system, used especially in the form of hydrochloride for the treatment of narcolepsy in adults and hyperkinetic disorders in children.
12. Non-adherence: Medication non-adherence most simply defined as the number of doses not taken or taken incorrectly that jeopardizes the patient's therapeutic outcome.
13. Opioid: Possessing some properties characteristic of opiate narcotics but not derived from opium: of, involving, or induced by an opioid.
14. Overdose: An overdose occurs when someone takes more than the normal or recommended amount of something, usually a drug. An overdose may result in serious, harmful symptoms or death.
15. Pharmacological: Relating to pharmacology or to the composition, properties, and actions of drugs.

16. Psychotherapeutic: The treatment of mental and emotional disorders through the use of psychological techniques designed to encourage communication of conflicts and insight
17. into problems, with the goal being relief of symptoms, changes in behavior leading to improved social and vocational functioning, and personality growth.
18. Sedatives: Tending to calm, moderate, or tranquilize nervousness or excitement, sedatives are drugs that quiets nervous excitement; they are designated according to the organ or system on which specific action is exerted: for example, cardiac, cerebral, nervous, respiratory, spinal.
19. Stimulants: An agent (as a drug) that produces a temporary increase of the functional activity or efficiency of an organism or any of its parts.

CHAPTER II: LITERATURE REVIEW

The literature on prescription drug use has revealed that there are serious concerns with the potential for prescription drug abuse among student-athletes. The non-medical use of prescription drugs has resulted in drug overdoses and other health problems. Information presented in this chapter also provides insight on concerns related to combining prescription medications and other drugs.

Prescription Drug Use Among College Students

Knowledge and ideas pertaining to the use of prescription drugs among college students are discussed in this section. To gain a broader outlook on the extent of the problem, examining the culture of drug use among all college athletes could be important to understanding this problem. Student-athletes are part of the overall college population.

McCabe, Cranford, Morales, and Young (2006) conducted a national study of US college students that revealed that users of prescription stimulants for non-medical purposes were over six times more likely to report frequent heavy drinking than their peers who did not report nonmedical use of prescription stimulants. In another national study of U.S. college students, nonmedical users of prescription opioids were over four times more likely to report frequent heavy drinking than their peers who did not report nonmedical use of either of these prescription opioids (McCabe, Teter, Boyd, Knight, Welcher, 2005). This study revealed that college students are involved in nonmedical use of prescription drugs, which could reveal some form of illicit behaviors, in order to obtain the prescription medications. Combining alcohol with other prescription medications such as considered respiratory depressants could place a high risk on a

student-athlete's health, as it relates to poly substance (using multiples drugs) use. This study conducted by McCabe et al. (2005) can also relate to the lack of education provided to student-athletes in the area of drug prevention.

McCabe (2008) concluded that nonmedical users of prescription drugs are at heightened risk for drug abuse. He also determined that:

> There is growing evidence that college students who report nonmedical use of prescription drugs are heavily involved with alcohol and other drug use behaviors (e.g., cigarette smoking, heavy drinking, and marijuana and other illicit drug use). The increases in prescription rates have raised public health concerns because of the abuse potential of these medications and high prevalence rates of nonmedical use, abuse, and dependence, especially among young adults 18 to 24 years of age. (p. 225)

According to an ongoing study at the University of Maryland, 10.8 percent of students nationwide have used prescription stimulants in nonmedical situations over the past year and 35.6 percent of students surveyed have used them at least once in their lifetime (Clinton Foundation, 2014). The nonmedical use of prescription drugs is a well-documented problem among US college students (McCabe, 2008).

Arria and DuPont (2010) expressed that "the nonmedical use of prescription stimulants is a complex behavior and should be viewed in the larger context of alcohol and drug involvement among young adults. Strategies to reduce nonmedical use of prescription stimulants might have direct application to the abuse of other prescription drugs, including opiates" (p. 1.). The illicit use of prescription drugs among adolescents and college students in the United States represents

a growing public health problem. In 2002, the annual prevalence of illicit use of prescription pain medications among college students reached a high point (Johnston, O'Malley, & Bachman, 2003), and recent epidemiological reports indicate that the illicit use of prescription pain medication continues to increase in the secondary school student population. While the national prevalence of heavy drinking among college students has remained relatively steady for the past decade, the illicit use of prescription pain medication has increased significantly among college students (McCabe, Teter, & Boyd, 2005). Although the illicit use of prescription pain medications among college students in the United States represents a problem, physicians need to strike a balance between the medical necessity to treat patients with prescription pain medications and the need to reduce their illicit use (Joranson et al., 2000).

Prescription Drug Use among Student-Athletes

An NCAA executive summary report conducted in 2014 revealed "nearly one-quarter of student-athletes reported using prescription pain medication. Approximately 23% of student-athletes reported using pain medication in the past year. Most student-athletes that reported use had a prescription for the medication. Approximately six percent of student-athletes indicated that they used prescription drugs without a prescription" (NCAA, 2014b).

Wolfe, Miller, Pescatello, and Barnes (2011) conducted a study that examined prescription drug use among student-athletes. Thirty-six percent of athletes who reported using more than the recommended dose of a drug believed that more non-prescription analgesics would relieve pain faster. As reported by Wolf et al. (2011), most football players (89%) used more than the recommended dose because they believed that football players require more

because they are larger than the average members of the population are. A lack of instruction by team physicians increases the likelihood that an athlete will use more of a medication than the recommended dose. Athletes who do this, and those who use medications to avoid missing a practice or game, are less likely to inform a team physician about his or her analgesic use.

Upon further examination of the study conducted by Wolf et al. in 2011, the data suggest that it could be imperative to focus on educating athletes who are on the risk of over-use of prescription painkillers as a means of decreasing their pain threshold. As Wolfe et al. (2011) examined a lack of instruction by team physicians; there could be a push for additional education from college institutions to implement substance abuse seminars as part of each team sport's yearly training upon entering school.

The provision and abuse of pain pills spans all levels of play, from high school adolescents to collegiate and professional athletes. Adolescent athletes do not identify the use of these drugs as a potential health risk and are known to self-medicate without any form of medical consultation (Ciocca et al., 2011; Veliz, Boyd, & McCabe, 2013). About one third of NCAA athletes questioned believe there is nothing wrong with using painkillers to cope with pain associated with competition (Tricker, 2000).

In addition, the 2013 NCAA Substance Abuse survey shows a 5% increase in total prescription pain medication use since 2009 (National Collegiate Athletic Association, 2014). Athletes rely on painkillers in anticipation of pain, and to avoid missing practices & games (Tricker, 2000; Wolfe et al., 2011). Self-medication with non-prescription analgesics correlates with an athlete's lack of knowledge or concern for label recommendations. Research shows these

athletes consume higher than the recommended dose, and for more consecutive days than recommended (Cotler, Abdallah, Cummings, Barr, Banks, & Forchheimer, 2011, Wolfe et al., 2011). The use of prescription painkillers is prevalent and on the rise in athletic participation (Cotler et al, 2011; NCAA, 2013). Based on the current landscape of prescription opioid medication use in sport, including knowledge and attitudes, there is a distinct need for education and policy reform. Education and intervention initiatives may then begin to shift athlete perceptions, and help to regulate the administration and control of pain per established sports medicine policies (Ulfers, 2014).

The Most Commonly Used Prescription Drugs

The most commonly abused prescription drugs in the United States include opiate painkillers (e.g., Vicodin, Xanax, and Ativan). Most drug overdoses can involve some combination of this medication, and often include alcohol. Opiates and sedatives can slow breathing. When taken together, these drugs can completely stop respiration, resulting in a fatal overdose. This risk of overdose and accidental death can increase when prescription painkillers or sedative drugs combine with alcohol. It is estimated that there are enough prescription painkillers prescribed in the United States every year to medicate every American adult 24 hours a day for a month (Washton, 2012).

Opioids have the potential to be major contributors to the accidental drug overdose death epidemic as explained in the research conducted by Washton (2012). This could contribute to the explanation of how so many individuals are becoming addicted to painkillers, given the estimated number of prescription painkillers in the United States that are available to each

individual. The accessibility of prescription medications, specifically opiates, as discussed, could increase the number of reported cases of abuse and addiction.

College aged adults are high risk for opiate use as discussed by Ford (2012). Although Ford reports no criminology related to the increase in substance use specifically by college students, there could be concern about the accessibility of prescription drugs. The questions could be: Where are the students obtaining the use of non-medical prescription drugs? Why are they so widespread on college campuses? In addition, how can college institutions work to limit the increase in college students' drug use? Improving and implementing additional Prescription Drug Monitoring/Educational programs on college campuses could help in reducing the increase in prescription drug use, thus also reducing the risk of addiction and abuse.

The abuse of prescription opioids and sedatives has been escalating since the mid-1990s (Substance Abuse and Mental Health Services Administration [SAMHSA], 2006). Currently, painkillers rank as the second most commonly abused drug after marijuana, and benzodiazepines are now the drug most identified in emergency room visits for drug abuse (SAMHSA, 2006). The report from SAMHSA (2006) further states that, "Due to the popularity of prescription drugs throughout the U.S, as reported, it is not surprising that college students can be at risk for prescription drug abuse" (p. 1).

Painkiller use can be common among student-athletes, due to the high risk of injury collegiate sports. There could be concerns that, because prescription drugs are a legal form of medication therapy and used to treat injuries, student-athletes might normalize non-medical use of painkillers and other prescription drugs? This concern supports the need for more

education related to this study.

Cultural Attitudes toward Drug Use

Student-Athletes can be at risk of experiencing long episodes of chronic pain due to some injuries. Shile (2013) suggested the following:

> Despite the risk of further injury and addiction, a huge number of athletes are using pain medications to cope with chronic pain. Sometimes, people get addicted to pain medication. Many athletes use pain medications to deal with chronic pain, but using these medications does not fix the injury. To prevent being 'sidelined,' some athletes turn to painkillers. They believe it is okay to use medicine to relieve pain while playing, as long as you are not making your injury worse. (p. 1)

Ford (2008) discussed a previous study addressing the non-medical use of prescription drugs. He discovered that 17% of college students reported using some type of nonmedical prescription drug in the past year: 12% had used opiates (e.g. hydrocodone), 8% tranquilizers (e.g. Xanax), 7% stimulants (e.g. Adderall), and 6% sedatives (e.g. sleeping pills). Research suggests that the college environment places students at a higher risk for prescription drug misuse because of drug popularity and ease of access on today's campuses. Many students do not see non-medical prescription drug use as something they can be arrested for; rather, they perceive it to be a socially acceptable and safe act (Ford, 2008). In this environment, the dual role of student-athletes creates a "unique collegiate experience that places them at greater risk for substance abuse" (Ford, 2008, p. 212). In addition, the 2013 NCAA Substance Abuse Survey shows a 5% increase in total prescription pain medication use since 2009 (Ulfers, 2014).

Drug Abuse

The Scope of Prescription Drug Misuse

The National Institute on Drug Abuse (NIDA) (2016) reported on the overview of non-medical prescription drug use:

> Nonmedical use of prescription drugs is highest among young adults aged 18 to 25, with 4.4% reporting nonmedical use in the past month. Among youth aged 12 to 17, 2.6 percent reported past-month nonmedical use of prescription medications (para. 4).
>
> Prescription drug abuse can have more severe physical effects than other forms of drug abuse. When addressing the complexities of prescription drug abuse, it begins with an understanding that these drugs are widely used because they can be obtained legally. Prescription drugs such as opioids (painkillers) can have serious interactions with other drugs, which affect the central nervous system (CNS); it, in turn, controls the respiratory system. Once the CNS has been affected by a combination of respiratory depressants, a person's breathing slows, which can leads to respiratory failure and even death. For this reason, prescription drug abuse differs from other forms of drug abuse because of the serious health risks that arise when prescription drugs are combined with other drugs. Opioid abuse also leads to more dangerous withdrawal phases than other drugs do. (p.1)

Also, in an additional report. Health effects of long-term opioid use were addressed. The National Institute on Drug Abuse (2014b) found that the following:

> While the relationship between opioid overdose and depressed respiration (slowed breathing) has been confirmed, researchers are also studying the long-term effects on brain function. Depressed respiration can affect the amount of oxygen that reaches the

> brain, a condition called hypoxia. Hypoxia can have short- and long-term psychological and neurological effects, including coma and permanent brain damage. Researchers are also investigating the long-term effects of opioid addiction on the brain. Studies have shown some deterioration of the brain's white matter due to heroin use, which may affect decision-making abilities, the ability to regulate behavior, and responses to stressful situations. More people die from overdoses of prescription opioids than from all other drugs combined, including heroin and cocaine. Central Nervous System (CNS) depressants slow down brain activity and can cause sleepiness and loss of coordination. Continued use can lead to physical dependence and withdrawal symptoms if discontinued. (p. 1)

There is limited amount of scholarship that specifically examine the illicit use and abuse of prescription drugs by student-athletes. Swartz & Kolodny (2015) revealed, "with the arduous physical demands of training and competition, college athletes are at particularly high risk for acute pain from injuries" (p. 2). They also expressed that "in the most recent NCAA survey, 23 % of college athletes reported receiving a prescription for a pain medication and 6 % reported using an opioid without a prescription in the prior year" (p. 2).

The misuse of prescription medications, also referred to as "non-medical" prescription drug use, takes many forms. Taking prescription medications for reasons other than the prescribed purpose, or at a higher dosage than prescribed, or taking medication prescribed to someone else can be considered misuse. Using a prescription drug to experiment, feel good, or just get "high" are also forms of drug abuse (National Council on Patient Information and Education, 2013).

In a national study addressing health policy review, Manchikanti (2007), found the following:

> Opioids are used extensively despite a lack of evidence of their effectiveness in improving pain or functional status with potential side effects of hyperalgesia, negative hormonal and immune effects, addiction and abuse. The multiple reasons for continued escalation of prescription drug abuse and overuse are lack of education among all segments including physicians, pharmacists, and the public; ineffective and incoherent prescription monitoring programs with lack of funding for a national prescription-monitoring program NASPER; and a reactive approach on behalf of numerous agencies. (p. 399)

The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) no longer uses the terms substance abuse and substance dependence. Rather, it refers to substance use disorders, defined as mild, moderate, or severe to indicate the level of severity, which is determined by the number of diagnostic criteria met by an individual. Substance use disorders occur when the recurrent use of alcohol and/or drugs causes clinically and functionally significant impairment, such as health problems, disability, and failure to meet major responsibilities at work, school, or home. According to the DSM-5, a diagnosis of substance use disorder is based on evidence of impaired control, social impairment, risky use, and pharmacological criteria (SAMHSA, 2015).

Effects of Prescription Drug Use

There can be different euphoric affects from using opioid medications. All opiates cause a pleasant drowsy state in which all cares are forgotten (nodding off), and there is a decreased sensation of pain (analgesia). Student-athletes could benefit from knowing that the feelings are

the most intense after injection. There are other physical reactions to opiate use. After the orgasmic feeling, sexual feelings usually diminish, and people experience decreased sexual desire and performance. This happens because opiates affect the release of many hormones and transmitters including those involved in the regulation of sexual behavior. While opiate users are in a dreamy, pleasant state, breathing slows, and pupils constrict, and users typically experience nausea and perhaps even vomiting. Opiates react on specific receptor molecules for the endorphin class of neurotransmitters in the brain (Kuhn, Swartzwelder, &Wilson, 2003).

Opioids (Painkillers)

Prescription painkillers are powerful drugs that reduce pain. These drugs are very helpful to people with severe pain from injuries, cancer, and other diseases. Patients who are prescribed painkillers for a long period of time may develop a "physical dependence" on them. This is not the same as addiction. Physical dependence happens because the body adapts to having the drug in the system, and when its use, abruptly stops, the person can experience symptoms of withdrawal. That is why this class of drugs need to be carefully monitored, and should be administered only under a doctor's orders (National Institute on Drug Abuse, [NIDA], 2015a).

Prescription painkillers can be highly addictive when used improperly without a doctor's prescription or in doses than prescribed. Addiction means that people will strongly crave the drug and continue to use it despite severe consequences to their health and their life. Prescription painkillers also affect the brain areas that control respiration, and when used improperly (or mixed with other drugs) can cause a severe decrease in breathing that can lead to death (NIDA, 2015a).

Types of opioids. NIDA (2015) found that there are several types of opioid medications that are used to treat pain. This class of drugs includes the following:

1. Fentanyl (Duragesic): Fentanyl is a powerful synthetic opiate analgesic similar to but more potent than morphine. It is typically used to treat patients with severe pain, or to manage pain after surgery. It is also sometimes used to treat people with chronic pain who are physically tolerant to opiates. It is a Schedule II prescription drug (National Institute on Drug Abuse, 2015b).
2. Hydrocodone (Vicodin): Vicodin is a combination of the narcotic hydrocodone and the non-narcotic pain reliever acetaminophen used for the relief of moderate to moderately severe pain. A generic version is available. The most common side effects of Vicodin include lightheadedness, dizziness, anxiety, nausea, vomiting, upset stomach, drowsiness, constipation, headache, mood changes, blurred vision, ringing in the ears, dry mouth, and difficulty urinating. Hydrocodone can impair thinking and the physical abilities required for driving or operating machinery. Hydrocodone can depress breathing, and should be used with caution in elderly, and/or debilitated patients, and in patients with serious lung disease. Vicodin may be habit forming. Mental and physical dependence can occur, but are unlikely when used for short-term relief (NIDA, 2015b)
3. Oxycodone (OxyContin): Oxycodone is a strong narcotic pain-reliever and cough suppressant similar to morphine, codeine, and hydrocodone. The precise mechanism of action is not known but may involve stimulation of the opioid receptors in the brain. Oxycodone does not eliminate the sensation of pain but does decrease

discomfort by increasing the tolerance to pain. In addition to tolerance to pain, oxycodone also causes sedation and depression of respiration. The FDA approved oxycodone in 1976 (NIDA, 2015b).

4. Oxymorphone (Opana): Oxymorphone is an opioid pain medication. An opioid is sometimes called a narcotic. Oxymorphone is used to treat moderate to severe pain. The extended-release form of this medicine is for around-the-clock treatment of severe pain. Oxymorphone is not for use on an as-needed basis for pain (NIDA, 2015b).
5. Propoxyphene (Darvon): Propoxyphene is a narcotic pain-reliever and cough suppressant but is weaker than morphine, codeine, and hydrocodone. The precise mechanism of action is not known but may involve stimulation of opioid in the brain. Propoxyphene increases pain tolerance and decreases discomfort, but the presence of pain is still apparent. In addition to pain reduction, the drug also causes sedation and respiratory depression. The FDA approved it in August 1957 (NIDA, 2015b).
6. Hydromorphone (Dilaudid): Hydromorphone is the brand name of the drug hydromorphone, which is used to relieve pain. This medicine is in a class of drugs called opiate analgesics. It works by changing the way the brain and nervous system respond to pain. The Food and Drug Administration (FDA) approved hydromorphone in 1984. Hydromorphone can slow or stop breathing if it is overused and can lead to a complete cessation of breathing (respiratory arrest) and death (NIDA, 2015b).
7. Meperidine (Demerol): Meperidine is used to treat moderate to severe pain. Meperidine acts on certain centers in the brain to provide pain relief. This medication

is a narcotic pain reliever similar to morphine (NIDA, 2015b).

8. Diphenoxylate (Lomotil**):** Diphenoxylate is used, along with other measures, such as replacement of lost fluids and salts in the body, to treat diarrhea. Diphenoxylate should not be given to children younger than 2 years of age. Diphenoxylate is in a class of medications called antidiarrheal agents. It works by decreasing activity of the bowel (NIDA, 2015b).

Prescription Drug Abuse and Addiction Factors

This research addresses concerns of addiction factors. A research study by Volkow and Swanson (2003) revealed the following:

> From a pharmacological perspective, prescription drugs fit into the same drug classes as more common illicit drugs. Methylphenidate and amphetamines fit into the stimulant category, like cocaine and methamphetamine, while hydrocodone and oxycodone fit into the category of opioids, like heroin. Thus, the same general pharmacological factors associated with abuse and addiction to non-prescription drugs apply to prescription drug abuse. Key variables that influence the abuse and addiction potential of these agents are: dose, route of administration, co-administration with other drugs, context, and expectations. (p. 56)

Addiction

Most drugs that are abused are addictive (National Institute on Drug Abuse, 2015a). Addiction is a chronic, relapsing disease characterized by compulsive drug-seeking and use despite negative consequences and by long-lasting changes in the brain. Characteristics of addiction include strong cravings for the drug, making it difficult to stop using. Many drugs alter

a person's thinking and judgment, which can increase the risk of injury or death from drugged driving, infectious diseases (e.g., HIV/AIDS, hepatitis), unsafe sexual practices or needle sharing (National Institute on Drug Abuse, [NIDA], 2015a).

Dose

Doses utilized therapeutically are lower than doses that are abused. For example, the doses of methylphenidate used for Attention Deficit Disorder are typically below the level expected to produce reinforcement (Volkow & Swanson, 2003). Reinforcement refers to the response that is probable after the stimulus. For opioid analgesics, this is not always the case. The doses required in some instances for adequate pain control can be identical to those taken by drug abusers (Fischman, 1989). In addition, the unpleasant effects from doses of opioid analgesics reported by non-drug abusing populations have been reported to be highly reinforcing by persons addicted to these substances (Zanchy & Gutierrez, 2003).

Rate of Onset of Action

Reinforcement (the way behaviors increase or decrease) from drugs are related to the rate of onset of action. A research study by Volkow and Swanson (2003), they found,

> The rate of onset describes the physical intensity of the drug. Because rate of onset is linked in practical ways to the route of administration, it is important to consider how these routes relate to reinforcement and addiction. Specifically, drugs ingested through injection, smoking, or inhalation feature a much more rapid onset (drug users feel the effects of the drug much faster) than the oral route; thus, reinforcement and addictive potential are lower for orally administered drugs. That said, oral routes of administration can lead to behavioral reinforcement and addiction, especially if dosages are high. (p. 56)

Co-ingestion of Multiple Agents

The co-ingestion of psychoactive substances with similar (e.g., sedatives and alcohol) or different (e.g., stimulants and nicotine) pharmacological profiles can, in some cases, result in additional reinforcement, thereby increasing the addictive potential. For example, in patients on daily methadone maintenance, the subjective and physiologic opioid effects of methadone are enhanced by any concurrent ingestion of benzodiazepines, despite the lack of demonstrated pharmacokinetic interactions (Preston, Griffiths, Cone, Darwin, & Gorodetzky, 1986).

Athletes need to recognize that even herbal medicines and supplements have adverse interactions with alcohol. Many OTC painkillers can come in a time-release form. It is important to understand that alcohol dissolves the coating, releasing the full dose immediately instead of being properly delayed, as intended by the manufacturer (Office of Alcohol and Drug Abuse Education, 2008).

In a study conducted by Cami, Farre, Gonzalez, Segura, and De la Torre (1998) the researchers expressed the following:

> Patients may also co-abuse substances to assist with side effects (e.g. the use of sedatives to overcome insomnia from stimulants) or to decrease undesirable drug effects (e.g. using cocaine to reduce alcohol-induced sedation). Such combinations are clearly dangerous in their own right; concurrent use of cocaine and alcohol, for example, produces cocaethylene, a psychoactive metabolite that is more toxic than those resulting from either agent singly. (p.437)

Context

Expectations about a drug's effects may be a key ingredient in the addictive potential of prescription drugs (Volkow & Swanson, 2003). A final factor to consider in determining a drug's abuse and addictive potential is its overall availability. The internet may play a significant role in this regard by providing new sources for access, which explains of the increase in abuse in recent decades (Forman, 2003; National Center on Addiction and Substance Abuse, 2004).

Counteractive Drugs

According to the Office of Alcohol and Drug Abuse Education (2008), athletes are often unaware of the effects of drinking alcohol while taking medications. Certain medications, such as anti-depressants, should not be mixed with alcohol. Students should also be aware that the medical community defines social use or drinking as one to two drinks in an evening or over a weekend. While medications may be okay to mix with a "moderate" amount of alcohol, having more than a few drinks can be dangerous. If a person is on medication, he or she needs to be aware of the specific guidelines and discuss his or her choice with physicians.

An interaction between alcohol and a drug is described as any change in the properties of effects of the drug when in the presence of alcohol (Office of Alcohol and Drug Abuse Education, 2008). Drug interactions may be:

1. Additive: The net effect of the drug taken with alcohol is the sum of their effects (Office of Alcohol and Drug Abuse Education, 2008).
2. Synergistic: The effect of the drug when combined with alcohol is greater than the sum of their effects (Office of Alcohol and Drug Abuse Education, 2008).

3. Antagonistic: The effect of the drug is diminished in the presence of alcohol (Office of Alcohol and Drug Abuse Education, 2008).

Legal Standards of Care for Athletes Related to Prescription Drugs

Counselors and medical staff who work with student-athletes are all considered caregivers, as they play a major role in student-athletes' health and well-being. It is the responsibility of the caregivers to recognize and address the health concerns of student-athletes. According to the National Association for Alcohol and Drug Abuse Counselors (NAADAC) (2013), a counselor's role is different from that of a member of the medical staff, from the standpoint of the level of care that they can provide, but they should both act as treatment team members in assessing the most effective type of care needed when dealing with addiction issues. These individuals (counselors and medical staff) are responsible for addressing students' lack of education in relationship to prescription drug use.

According to US Legal (1997), standard of care refers to the degree of attentiveness, caution and prudence that a reasonable person in the same circumstances would exercise. Failure to meet the standard is considered negligence, and the person who fails to meet the standard is liable for any damages caused by such negligence (p. 1). Legal standards of care also refer to "a diagnostic and treatment process that a clinician should follow for a certain type of patient, illness, or clinical circumstance" (Medical Definition, 1996, p. 1). The NAADAC (2013) outlines standards of care for all individuals seeking certification or licensure by this nationally accredited board.

Team physicians face dilemmas when treating student-athletes. A research study by Earl and Sohn (2015) revealed:

> Sports medicine physicians often face a dilemma shaped by several different sets of pressures from athletes and team affiliates. The goals of a team physician are to foster the long-term health and well-being of the athletes and to help them achieve full recovery from musculoskeletal injuries and related surgeries. The goals of the athletes and team management officials are often performance-based, with monetary implications and a focus on returning to play as soon as possible. These competing goals can quickly breed tensions in the physician-patient relationship and adding to the complexity is the litigious environment of sports medicine. Disagreements about best practices and clinical judgments can cost team physicians millions of dollars in malpractice awards. (p. 1)

The Clinical Practice Guideline (CPG) for the Management of Opioid (painkiller) Therapy (OT) for Chronic Pain was developed under the auspices of the Veterans Health Administration (VHA) and the Department of Defense (DOD) pursuant to directives from the Department of Veterans Affairs (VA). In an article by the Management of Opioid Therapy for Chronic Pain (2010), the VHA and DOD define clinical practice guidelines as,

> Recommendations for the performance or exclusion of specific procedures or services derived through a rigorous methodological approach that include: (1) determination of appropriate criteria such as effectiveness, efficacy, population benefit, or patient satisfaction; and (2) literature review to determine the strength of the evidence in relation to these criteria (p. 3).

Physicians operate under a number of professional codes and regulations that delineate their professional responsibilities to their patients. The American Medical Association (AMA)

Code of Medical Ethics states that a physician's paramount concern must be the well-being of his/her patient (Calandrillo, 2006). Calandrillo (2006) expressed that healthcare providers are,

> Bound not to let any other interest interfere with that of the patient in being cured. Doctors are also bound by the requirements of the Hippocratic Oath. The original version of the Oath stated that physicians must endeavor to prevent 'harm and injustice' to their patients. (p. 188)

One modern version of the Hippocratic Oath is, the Oath of Lasagna that, requires doctors take all necessary measures to heal the sick, while avoiding the "twin traps of overtreatment and therapeutic nihilism" (Calandrillo, 2006, p. 188). Unfortunately, the argument is sustained by the lack of solid evidence on either side. Both perspectives claim the moral high ground, and an ongoing appeal to ethics instead of to scientific evidence clouds the essential issues and prevents consensus on the appropriate use of opiates in chronic pain (Fields, 2011).

The American Medical Association (AMA) maintains distinct regulations for physicians who treat athletes. Calandrillo (2006) discussed the AMA Code of Medical Ethics, 3.06, which requires that physicians assist players in making "informed decisions about their participation in amateur and professional contact sports that entail risks of bodily injury" (p. 189). A physician's only consideration should be the medical care of the participant, and not the desire of the athlete, the team, or its fans. Allowing the athlete to return to the field should not be controlling factor. The AMA also explicitly obliges physicians to avoid conflicts of interest. AMA Code of Medical Ethics 8.03 stated, "under no circumstances may physicians place their own financial interests above the welfare of their patients" (Calandrillo, 2006, p. 189). Moreover, any conflict between a

physician's financial interest and his/her responsibility to the patient must be resolved to the patient's benefit (Calandrillo, 2006).

Finally, beyond professional regulation, healthcare providers face potential tort liability for the medical services they render, and therefore must follow the relevant standard of care in their treatment of athlete and patients. The research study by Calandrillo (2006) referenced a statement by Joseph King, an athletic team physician, who stated:

> Team physician[s] should perform with the level of knowledge, skill, and care that is expected of a reasonably competent medical practitioner under similar circumstances, taking into account reasonable limits that have been placed on the scope of the physician's undertaking. Thus, physicians who treat athletes must be cognizant of a host of relevant professional regulations and common law standards that govern the medical care they provide. (p. 189)

Prescription Drug Measurement Scales

The use of measuring scales to examine student-athletes' prescription drug use can be an effective tool. Degenhardt, Larance, and Mattick (2010) expressed:

> An emerging body of literature in the United States describes aberrant (i.e. divergent) medication-related behaviors among pain patients, and the extent to which they are associated with harm, including medical morbidity, dependence and diversion. The purpose of the prescription drug monitoring scale is to assist in the identification of behaviors relating to pharmaceutical opioids that may reflect problems with treatment so that clinicians can better assist patients to minimize any unintended consequences and harms such as inadequate pain relief, overdose, accidents, and dependence. (p. 1)

Non-adherence to prescription medications is considered one of the largest drug related issues in the world. The World Health Organization states that non-adherence to medications is a "worldwide problem of striking magnitude (Tan, Patel, & Chang, 2014, p. 1). Poor medication adherence can cause negative health outcomes such as worsening disease or even death and studies show that there is an association between poor adherence to medications indicated for chronic diseases and the utilization of health resources. It is estimated that 33%-69% of drug related hospital admissions in the United States are due to poor medication adherence, with a cost of about $100 billion dollars a year (Tan, Patel, & Chang, 2014).

Over the last two decades, some progress has been made in achieving consensus on the terms related to prescription opioid abuse but more work is needed. The terms abuse and misuse are widely used, but with different meanings by different authors. Misuse refers to inappropriate use of medications, but for medical purposes rather than for mind-altering effects. Examples include unauthorized dose escalation for pain treatment, cutting extended release for formulations for faster analgesic onset or to save money, or sharing the medication with others for pain. Abuse is the umbrella term referring to the use of medication for mind altering affects, whether or not one also has pain or has been prescribed the medication. Both abuse and misuse may also constitute noncompliance if one has received a prescription with instructions not to engage in the forbidden behaviors (Katz, 2008).

Prescription opioid abuse is a large and rapidly growing problem in the United States, having surpassed cocaine and heroin as drugs of abuse in both population-based and emergency departments-based surveys. Prevalence of prescription opioid misuse by adolescents and young adults is on the rise. The development by an Opioid Attractiveness Scale (OAS) is a tool that

measures the appeal of certain medications for non-medical recreational use and abuse potential. The use of the OAS to assess attractiveness of established and new prescription opioid products, including modified release forms, may provide information of value in understanding the assessment of the relative risk of products of abuse (Butler, Benoit, Budman, Fernandez, McCormick, Venuti & Katz, 2006).

Kahn, Wilson, Gagnon, and Srivastava (2011), conducted a meta-analysis, which revealed the following:

> 3.3% of individuals experiencing non-cancerous pain and, taking prescribed opioids, were addicted to them, with wide variation between clinics and regions. Adherent drug-related behaviors, which sometimes indicate addiction, had an estimated prevalence of 11.5%. The researcher furthers surmised that the prevalence of opioid misuse and addiction is increasing throughout North America. In tandem with the increase in the prescribing of controlled-release opioids, physician groups, medical regulators, and public health officials are considering various policy options to address the crisis. These include physician education, a prescription monitoring system, the expansion of addiction treatment, and the use of screening questionnaires to help the risk of opioid misuse and addiction. (p. 10)

The abuse of illicit substances can cause health issues, which is related to adolescents experiencing personal stressors. Winters (2003) discussed the following in a study:

> Alcohol and other drugs (AOD) involvement is still a major public health issue in this country. We know that teenagers often abuse alcohol and other substances and that their development is hindered by such abuse as they age into adulthood. Adolescent use may

> involve recreational benefits (e.g., having fun), social conformity, mood enhancement, and coping with stress. One approach is to use screening instruments, most commonly self-reported questionnaires, to determine the possible or probable presence of a drug problem. (p. 101)

Screening Tools

People who abuse opioid prescriptions will generally display one or more aberrant drug related behaviors. However, patients who are not abusing opioids may also display aberrant behaviors. A patient's request for an early refill may result from intentional overuse of medications (abuse) or from a one-time incident where an individual accidentally destroys a few pills. Most physicians would not consider the latter incident to be an example of abuse. The more aberrant behaviors an individual exhibits, the more likely the individual is abusing or is addicted to opioids (Webster & Webster, 2005).

There are diagnostic tools to assess for aberrant behaviors that may help clinicians (team doctors) detect when a patient is currently abusing or addicted to prescription medications. There also is a need for a tool to measure the likelihood of whether a patient will abuse opioids in the future. Because abuse and addiction are diagnosed by observing aberrant behaviors, knowing which patients are at greatest risk for displaying aberrant behaviors can be useful in establishing appropriate levels of monitoring for abuse (Webster & Webster, 2005). Regarding students' misuse of prescription stimulants, studies have consistently found that college students report knowing someone who has used recreationally (Carroll, McLaughlin, & Blake, 2006; Hall, Irwin, Bowman, Frankenberger & Jewet, 2005).

Increasing use of illicit medications continue to rise. Zanchy, Bigelow, Compton, Foley, Ignuchi, and Sannerud (2003) discussed the rise in the increasing use of illicit medications:

> Prescription opioids are on the rise in the United States. Prescription opioids in the US include morphine (both immediate-release and sustained release, e.g. MS-Contin), Levorphanol (Leveo-Dromoran), methadone, codeine (opioid constituent in Tylenol-3), hydrocodone (opioid constituent in Vicodin, Lortab), oxycodone (opioid constituent in Percodan, Oxycontin), propoxyphene (opioid constituent in Darvon), fentanyl (Duragesic, Actiq, Oralet), tramadol (ultram), and hydromorphone (Dilaudid). The epidemiological data, along with media reports of abuse of prescription opioids (painkillers) such as Oxycontin, Vicodin, and Percodan, have received a great deal of attention, and has engendered a great deal of concern in the country. (p. 216)

Preventive Measures

According to the National Alliance for Model State Drug Laws (NAMSDL), a Prescription Drug Monitoring Program (PDMP) is a statewide electronic database data collects designated data on substances dispensed in the state. The PDMP is housed by a specific, state-wide regulatory, administrative or law enforcement agency. The housing agency distributes data from the database to individuals who are authorized under state law to receive information for purposes of their profession (US Department of Justice, 2011).

The US Department of Justice (2011) identified the benefits to implementing a PDMP in athletics. The overview provided by NAMSDL clearly identifies the benefits of a PDMP: as a tool used by states to address prescription drug abuse, addiction and diversion, it may serve several purposes such as:

1) Support access to legitimate medical use of controlled substances

2) Identify and deter or prevent drug abuse and diversion

3) Facilitate and encourage the identification, intervention with and treatment of persons addicted to prescription drugs

4) Inform public health initiatives through outlining of drug use and abuse trends.

5) Educate individuals about PDMP and the use, abuse, diversion, and addiction to prescription drugs.

In a study conducted by Farleman (2016), three specific areas of potential prevention were outlined as solutions to address prescription drug misuse by student-athletes. These areas include:

1) Change the Environment:

We need to change the attitudes we have towards prescription misuse/abuse. A mindset focused on harnessing internal motivations provides a foundation for positive change. Changing the attitude associated with prescription abuse begins to break the "no talk, don't talk" bubble. The impact of prescription drug abuse goes beyond the individual. Its ripple effects can be traced to the team, campus life, and the community. It is everyone's problem (p. 1).

2. Address the Misconception:

Student-athletes need more than just "don't do it". Historically we see how a "just say no" philosophy fails to address abusive behavior. Education regarding what prescription misuse and abuse entails and the health impacts misusing or abusing prescription

> medications can have, is critical. Student-athletes are held legally responsible for what they ingest (p. 1).
>
> 3. Develop a Proactive Plan:
>
> Institutions and athletic departments should focus on designing a proactive plan to address key factors influencing student-athlete prescription misuse, including student-athlete access to academic and mental health services. Conversations with institutional Student-Athlete Advisory Committees (SAAC's) will be essential to engaging the student-athlete voice when developing a proactive plan to address prescription drug abuse (p. 1, para. 3).

Focus should also be targeting educating medical staff and all caregivers who work with athletes. Research by Alaranta, Alaranta, & Helenius (2012), determined:

> Physicians and pharmacists taking care of athletes' medication need to be aware of the medicines that an athlete is taking and how those medicines interact with performance, exercise, environment and other medicines. Sport associations should repeatedly monitor not only the use of banned substances, but also the trends of use of legal medicines in athletes. Not only physicians and pharmacists, but also athletes and coaches should be better educated with respect to potential benefits and risks, and how each agent may affect an athlete's performance. The attitudes and beliefs leading to ample use of legal medicines in athletes is an interesting area of future research. (para. 1)

Conceptual Framework

The Social Learning Theory serves as a part of the foundation for the purpose of this study. This theory championed by psychologist Albert Bandura helps to frame an understanding

as to why student-athletes may choose to use and misuse prescription drugs. Cherry (2017) stated:

> The Social Learning Theory proposed by Albert Bandura has become perhaps the most influential theory of learning and development. While rooted in many of the basic concepts of traditional learning theory, Bandura believed that direct reinforcement could not account for all types of learning. (p.1)

In recent years, scholarship has challenged users about their rationale for continued drug use as a means of adapting and coping with internal and external pressures (Life Process Programs, n.d.). Student- athletes may involve themselves in certain behaviors that may determine if they will return to the playing field. Bandura (1971) stated, "as a result of prior experiences, people come to expect that certain actions will gain them outcomes they value" (p. 4).

Social Learning Theory

Ronald Akers developed Social Learning Theory as a contemporary addition to Sutherland's original Differential Association Theory. Both are social process theorists, who believe that socialization is a key determinant of behavior. Bandura (1978) examined theories of social learning and stated, "modeling is sometimes referred to as vicarious learning" (p.1). Social Learning Theory revolves around the idea that behavior is learned through close relationships with others, such as friends or family (Ong, 2011).

Subcultures and groups provide social environments that could contribute to deviant behaviors, such as drug use, as is explicated by Akers, Krohn, Kaduce, and Radosevich (1979):

> Social learning has a clear-cut application in explaining drug use. It reports that the use and abuse of psychoactive substances can be explained by differential exposure to groups

> in which drug use is rewarded. Behavior is also strengthened by reward. These groups provide the social environments in which exposure to definitions, imitations of models, and social reinforcements for the use of or abstinence from any particular substance take place. Drug use is determined by the extent to which a given pattern [behavior] is sustained by the combination of social reinforcement, association with peers, and by the degree to which it is not deterred through bad effects of the substance and/or the negative sanctions from peers, parents, and the law. (p. 638)

Leonard and Blane (1999) explained social leaning view of behavior as not only viewed as controlled by the internal environment, but also involves interrelated control systems in which behavior is also controlled by external stimulus events. Four principles of Social Learning Theory are:

1. Differential Reinforcement: The application of consequences of a behavior dependent on stimulus conditions (p. 109).
2. Vicarious Learning: Humans may acquire new behaviors through observation of others (p. 109).
3. Cognitive Behaviors: Cognitive processes such as encoding, organizing, and retrieving information regulate behavior (p. 109).
4. Reciprocal Determinism: A person's determines a person's behavior personal factors the environment (p. 109).

According to Social Learning Theory, observations of other people engaging in addictive behavior can lead to the development of addiction. When we observe the behavior and reactions of other people using addictive substances (or activities), we may wish to repeat what we saw

(Horvath, Misra, Epner, and Cooper, 2017). A study conducted by Higgins, Mahoney, and Ricketts (2009) identified that social learning theory had a consistent link with the nonmedical use of prescription drugs.

Adolescents can be affected by influences from family and peers. In a multi-stage study on the social learning model that addressed this concern, Simmons, Conger, and Whitebeck (1988) discussed the relation between substance abuse and this model:

> Building upon the work of Bandura (1977) and Patterson (1986), but also drawing from theory and research on coping and value socialization, the model provides an explanatory framework for many of the well-established empirical generalizations concerning drug use and generates a number of new hypotheses. While the model provides an explanation for initiation into substance use, it is primarily concerned with identifying those factors, which cause adolescents to escalate their involvement with substances. (p. 1)

Other studies have used Social Learning Theory. For example, Ong (2011), using data from a sample of 549 University of Central Florida-Orlando students, tested the relationship between prescription stimulant misuse and Social Learning Theory. Approximately 17% of participants reported misusing prescription stimulants for academic purposes at least once in the past year. Findings support Social Learning Theory, showing that the number of friends who use prescription stimulants and the individual's attitudes about the effectiveness of the drugs are both significant variables (Ong, 2011).

Akers and Lee (1996) researched how Social Learning Theory is related to influences of adolescents and smoking habits. Their research identified that the cross-sectional relationship between smoking and social learning variables was strong (Akers & Lee, 1996). Explanations for

criminal behavior are associated with learned behaviors. “Social learning is a general theory that offers an explanation of the acquisition, maintenance, and change in criminal and deviant behavior that embraces social, nonsocial, and cultural factors operating both to motivate and control criminal behavior and both to promote and undermine conformity” (Akers, and Jensen, 2006, p. 2).

Research Questions

Based on the review of literature and the conceptual framework used in this study the following research questions were developed to guide this study:

RQ1: Is there a difference in the perceived lack of awareness among the sample in relation to prescription drug use?

RQ2: How frequently are prescription drugs used among the sample?

RQ3: Among the sample population, what is the level of awareness about the culture of prescription drug use in college athletics?

RQ4: Is there a need for more prescription drug monitoring and education programs for student-athletes?

Relevance to Intercollegiate Athletics

Ongoing evaluation and research in this area is pertinent to college athletics, in order to assess and examine the educational resources provided to student-athletes and athletic staff regarding prescription drug use. Efforts need to be made to continue improving the programs and procedures currently in use, those that monitor the distribution of prescription drugs, and the education provided to student-athletes. Furthermore, ongoing dialogue between practitioners and

researchers should continue in order to address this issue. This will provide more education and awareness for all individuals involved with the well-being of student-athletes.

Providing more education and literature in this area could be significant for identifying and examining the risks athletes take to remain on the field. Implementing more training to prevent prescription drug abuse is important. Smith (2012) reported that prescribers and dispensers of controlled substance, including physicians, all have a role to play, in reducing prescription drug misuse and abuse but most receive little training in addictive disorders.

CHAPTER III: METHODOLOGY

Methods

A survey was used for primary data collection in completion of this study. Elite interviews, document reviews, and questionnaires were used as supplementary methods. The methodology of each form of data collection will be detailed in this section.

Questionnaires

Questionnaires are a very traditional way of conducting research. They are particularly useful for nonexperimental descriptive designs that seek to describe reality. For example, a questionnaire approach may be used to establish the prevalence or incidence of a particular condition. Likewise, the questionnaire approach is frequently used to collect information on attitudes and behavior (Mathers, Fox, & Hunn, 2007). The questionnaire is probably the most commonly used research design in health services research and the social sciences. As consumers we are frequently asked about our shopping habits and opinions about services. The questionnaire is a flexible research approach used to investigate a wide range of topics (Mathers, Fox, & Hun, 2007).

Questionnaire design is a multistage process that requires attention to many details at once. Designing the questionnaire is complicated because questionnaires can ask about topics in varying degrees of detail, questions can be asked in different ways, and questions asked earlier in a questionnaire may influence how people respond to later questions (U.S. Survey Research, n.d.). Characteristics of questionnaires are that they are quantitative, self-monitoring, replicable, contemporary, systematic, impartial, representative, and theory-based (Burton, 2007).

Questionnaires should be based on substantial micro fieldwork and need to be carried out by investigators who are familiar with the questions being studied (Caldwell, 1985).

Questionnaire response rates can vary for each mode and are affected by aspects of the questionnaire design (e.g., number of calls/contacts, length of field period, use of incentives, questionnaire length, etc.). The questionnaire constructed in this study was provided to participants through email. Sheehan (2001) calculated response rates for several different data collection methods. The author concluded that "for email questionnaires a 40% response rate is considered average; 50% good; and 60% very good" (p. 1). This is calculated by dividing the number of completed questionnaire s by the number of people contacted.

This Study's Design

A Division III college in the Southeast was selected as the site for the research study. Student-athletes participated in an online Qualtrics-based questionnaire. The researcher received guidance on how to obtain specific documents to review from the schools website by the athletic director. The researchers focus was to gain awareness of services provided to student-athletes related to drug and alcohol prevention. A recruitment statement was forwarded to the athletic director in order to send by email to the student-athletes who participated in the online e-questionnaire.

This study focused on the culture, awareness, and knowledge of prescription drug use among student-athletes, along with gaining perspective from the opinions of the interviewees about the need for additional preventive measures related to prescription drug education. This required a high level of confidentiality to protect the respondents and the college institution.

Conducting research at a small institution required an understanding for the need for strict measures related to confidentiality while constructing the questionnaire. When deciding to conduct survey research, the researcher had to understand that some of the questionnaire participants could be reluctant to answer questions related to drug use. There have been studies conducted over several years addressing the prevalence of prescription drug use.

During the past 30 years, national questionnaires have delved into increasingly sensitive topics. To cite one example, since 1971, the federal government has sponsored a series of recurring studies to estimate the prevalence of illicit drug use, originally the National Survey of Drug Abuse, later the National Household Survey of Drug Abuse, and currently the National Questionnaire on Drug Use and Health. An important question about such questionnaires is whether respondents answer the questions truthfully. Methodological research on the accuracy of the responses in questionnaires about illicit drug use and other sensitive topics suggests that misreporting is a major source of error, more specifically of bias, in the estimates derived from these questionnaires" (Tourangeau & Yan, 2007, p. 859).

Data collection from multiple cohorts can help strengthen the findings from small populations. This may mean collecting data more frequently, if possible. An expanded evidence base with a triangulation of results from multiple sources can strengthen the validity of smaller sample sizes. Having an unbiased but small sample can be far more reliable than a biased but large sample" (Brockalorenz, Hurtado, & Thomas, 2016).

Confidentiality

The Institutional Review Board at the University of Tennessee approved this research study. There was also secondary approval from the Institutional Review Board at the research site. The secondary approval site not revealed in order to protect the identification of the participants in the study. All participants were informed of the study's purpose, and there will be no identifying markers attached to them. The title of the study's project was constructed in order to not reveal the identification of the institution, and to prevent any preconceived opinions about their student-athletes or administration.

There were some concerns related to participants' and the institution's confidentiality. One concern was student-athletes revealing their responses to the questionnaire to their peers. Considering the geographical location and the size of the institution, someone could be able to identify the study's site once the information is analyzed in this paper. An additional concern was protecting information of certain demographics among the questionnaire participants in order to, to avoid any biases with illicit drug use among certain population (ex. Latinos, Caucasians), since there were fewer than 10 respondents and given that the overwhelming majority of the student-athletes who participated in the study are African-American.

Data Collection

An Institutional Review Board (IRB) application was submitted to iMedRIS to seek approval to conduct the study. The IRB approval letters are located in Appendix II. Data collection did not begin until IRB approval was confirmed. The data collection period remained

open from December 2016 through February 2017. A letter explaining the study was sent to the athletic director at the participating institution to solicit his or her participation. If the institution selected to opt out and not participate, the athletic director would be asked to provide a written response on the institution's letterhead confirming the same. The institution agreed to participate in the study as outlined in a formal letter.

Once University of Tennessee's IRB approval was obtained, the IRB office at the participating school was contacted to solicit their approval. Once approval was obtained from the partnering school, the respective athletic director was forwarded the link containing the questionnaire to all student-athletes. The athletic director informed participants that this is a voluntary study and that they may decline to participate at any time. All study participants were informed that their responses would be anonymous and confidential and that no identifiable markers would be used that may reveal their identity.

Questionnaires. The questionnaire link was open during the entire data collection period. I collected the information from the questionnaire through an online e-questionnaire link, which was forwarded through the student-athletes' personal e-mail accounts. The athletic director assisted in obtaining the participants e-mail accounts and forwarding the questionnaire link to the student-athletes. Once the questionnaire portal closed, the information was forwarded to OIT Research Computing Support at the University of Tennessee for analysis. The questionnaire related to student-athlete's knowledge, use, and cultural awareness, of prescription drug use. There was an additional section requiring identification of demographics (ex. age, gender, classification, sport).

After the questionnaires were completed, the researcher reviewed all responses to each section of the questionnaire. Frequencies and percentages were calculated for questions related to each of the research questions. In RQ1, the data was analyzed by using t-test and one-way ANOVA. In RQ4, a chi-square test for independence was conducted. A secondary analysis was used in categories of male and female respondents. Table 1 located in Appendix I provides a summary of the data analysis procedures that were used in the study to answer the research questions.

Study Participants

The study's sample consisted of 100 student-athletes, males and females, from a Division III institution in the Southeast. Participants were ask to provide demographic information (i.e., age, classification, sport, and gender) in one section of the questionnaire. Two athletic staff members were interviewed as part of this study.

Sampling

Purposive sampling was used in this study because of the design of the study as well as the researcher's knowledge of the population. Babbie (2007) suggested that it is appropriate to select a sample on the "basis of knowledge of a population, its elements, and the purpose of the study" (p. 185).

Measures

The student-athlete questionnaire contained four key measures: 1) knowledge of prescription drug use; 2) personal use of prescription drugs; and 3) the culture of prescription drug use in college athletics; 4) demographics of each student-athlete participating in the study. The format of the research questions was based on a modified Stimulant Survey Questionnaire

(Weyandt, Janusis, Wilson, Verdi, Paquin, Lopes, & Dussault, 2009). Each section included an explanation of how to answer the questions. The athletic staff members' questions assessed their knowledge of Prescription Drug Monitoring Programs and the potential need for additional education related to prescription drug use among student-athletes.

Questionnaire Instrument

Online questionnaires are an efficient method for conducting research (McDougall, 2014). As mentioned, the questionnaire instrument used in this study represents a modified version of the Stimulant Survey Questionnaire (SSQ). The instrument was developed and tested for reliability and validity by Lisa Weyandt in 2009. The instrument contains 40 items and is designed to measure the use and misuse of prescription stimulant medications in college students while also ascertaining their knowledge about prescription stimulants.

Instrumentation

The questionnaire was comprised of four sections. Section I assessed respondents' personal use of prescription drugs. Section II assessed personal knowledge about the use of prescription drugs. In Section III, participants were asked about their awareness of the culture of prescription drug use. Finally, Section IV gathered demographic information about the sample. The modified SSQ used specifically targets opiate use among college athletes. The questionnaire data was collected using the online e-questionnaire site Qualtrics, and then analyzed with the Statistical Package for the Social Sciences (SPSS) version 22.

The questionnaire consists of statements rated on a six-point Likert scale, with Section I items 1–15 ranging from 1, "never" to 6, "always." In Section II, items 1–10 range from 1,

"strongly disagree" to 7, "strongly agree." In Section III. items 1–20 ranging from 1, "strongly disagree to 7, strongly agree. At the conclusion of the questionnaire in Section IV, there were two additional queries. The first asks if athletes think there is a need for more education in relation to prescription drug use (yes/no responses), while the second assesses how important student-athletes think it is to offer more education on prescription drug use (possible responses range from "not at all" to "extremely important."

Scoring. The SSQ allows for the creation of composite scores for each section (Weydant, 2009). In the questionnaire used in this study composite scores calculated for the *Personal Use of Prescription Drugs, Personal knowledge About the Use of Prescription Drugs, and Awareness of the Culture of Prescription Drug Use* subscales. The composite scores were used to test RQ1 and for supplemental testing in RQ4.

There were 11 questions formulated for the two athletic department staff members interviewed. These questions included: 1) are you aware of what electronic prescription drug monitoring systems are and: 2) do you believe that it is difficult to monitor prescription drug use among student-athletes?

Delimitation

The scope of delimitation of this study was to explore prescription drug use at a small college. This study compiles information about the behaviors of prescription drug use among student-athletes' and stakeholders' (athletic staff) knowledge of potential services needed to assist if the prevalence of drug use is evident. The data collected was not presented to assess this as a holistic problem among only small colleges, but as a means to obtain valuable information for the academy of sport management.

An additional delimitation is addressing issues of prescription drug use among student-athletes, and having to document their beliefs and opinions. Even from an anonymous standpoint, where there is no communication with the researcher, resistance in questionnaire participation can exist. I chose to address this topic because of the limited amount of research specifically addressing prescription drug use among athletes.

CHAPTER IV: RESULTS

Cohen (2006) expressed that, "the questions are created prior to the interview, often have a limited set of response categories and there is generally little room for variation in responses and there are few open-ended questions included in the interview guide" (p. 1). Both participants were treated objectively because the questions were based on information related to a population that they currently work with (student-athletes) and the research study. King (1994) stated, "researchers should not frame the research question in a way which reflects his/her own presuppositions or biases" (p. 19). Another reason for conducting structured interviews was due to time constraints of the two participants.

Questionnaire Results

Profile of the Sample

To develop a profile of the sample, the researcher calculated means, frequencies and percentages for each variable. In the composition of the sample the majority were men (n=43; 57.3%). Greater than one-half of the sample were between the ages of 21 - 24 (n=38; 50.7%). Additionally, the overwhelming majority of the individuals in the sample self-identified as African American (n=65; 86.7%). In terms of academic standing, the largest sub-group were juniors (n=23; 30.7%) followed by sophomores (n=20; 26.7%). Finally, the majority of student-athletes who took part in the questionnaire were basketball players (n=27; 36.0%). Table 1 provides a detailed demographic summary of the sample. See Table 3 in Appendix I.

RQ1: Is there a difference in the perceived lack of awareness among the sample in relation to prescription drug use?

Among the sample, the overall response related to perceived awareness revealed 34% of student-athletes disagree that they feel aware/knowledgeable about prescription drug use, opposed to 26% of the sample who agree that they feel aware/knowledgeable about prescription drug use. Table 4 in Appendix I provides additional detail.

Another key area examined was student-athletes' lack of awareness of the different types of painkillers. This data was of concern due to student-athletes' having to take prescription medications, at times, to address their injuries. Only 5.3% of student-athletes' strongly agree feel they are aware of the different types of painkillers.

Supplemental statistical testing was done using t-test and one-way ANOVA to further explore differences relating to the awareness of prescription drug use among the sample by the variables of gender, academic classification, age, and sport area. Among the sample, significant differences in awareness were found for gender, age, and sport area [(t (73)=2.27, p=.03; t (73=-2.23, p =.03; (F (3, 71) = 6.08, p = .001)], respectively. A post hoc comparison using Tukey HSD indicated that the mean score for baseball was significantly different from the category of 'Other' (M = 1.06, SD = .26, p = .001). No difference in the awareness of prescription drug use was found among the sample when academic classification was examined (F (3, 71)=1.97, p = .13).

RQ2: How frequently are prescription drugs used among the sample for nonmedical use?

Although 81% (N=75) of student-athletes reported that they have never used prescription drugs for non-medical use, there were areas of concern to suggest implementing additional education in this area. One key questionnaire item that relates to this data is that 12% of student-athletes have admitted that they have taken prescription drugs for non-medical use to perform in their sport. In addition, the data also revealed that 26% of student-athletes have taken prescription painkillers without a prescription. Additionally, 24% of student-athletes surveyed admitted that they have taken someone else's prescription medication. See Table 5.1 and 5.2 in Appendix I.

RQ3: Among the sample population, what is the level of awareness about the culture of prescription drug use in college athletics?

The data generated from analyzing this research question indicates that there are differences in the level of agreement about the culture of prescription drug use in college athletics. For example, on the statement 'I know athletes who snort prescription drugs' a combined 95.0% (n=72) of the sample disagreed. On another statement, a combined 88.0% (n=66) of the sample disagreed with the statement 'Some athletes hide their prescription medication so that no one else will take it. Twelve percent of student-athletes believe "it is okay to take more medication that prescribed if it helps them resume playing in their sport." Furthermore, four percent of student-athletes strongly agree that they believe 'it is okay to take more medication than prescribed.' There were also findings that address the issue of student-athletes having access to additional prescription medications from their peers. The data also

indicated that two percent of student-athletes reported 'knowing other athletes who purchase prescription drugs from other people.' There were health concerns because of the sample's response. Finally, the data also revealed 10% of the sample agreed that they 'know students who use alcohol with prescription drugs.' See Table 6 in Appendix I.

RQ4: Is there a need for more prescription drug monitoring and education programs for student-athletes?

When members of the sample were asked this question, over half of the sample indicated "no" (n=39, 52.0%), while the remaining proportion of the sample indicated "yes" (n=6, 8.0%). Similarly, when the study participants were asked about the importance of the need for more education on prescription drug use the majority of the sample indicated that it was extremely/very important (n=59, 78.6%). The following information below provides a breakdown of the responses for this question. See Table 7 in Appendix I.

Additional statistical testing was conducted using a chi-square test for independence to determine if an association existed between gender, academic classification, age, sport area and the need for more education on prescription drug use. Testing of the data revealed that mild, but significant associations existed between gender, academic classification and the need for more education prescription drug education [χ^2 (1, *N*=75) = 4.85, p = .04; χ^2 =. 25; χ^2 (3, *N*=75) = 8.20, p = .04], respectively. There was no association found between age, sport area and the need for more prescription drug education [(χ^2 (1, *N*=75), .001, p = .97; χ^2 (3, *N*=75) = 6.66, p = .08)], respectively. See Table 7 in Appendix I.

As a part of educating student-athletes about prescription drug use, practitioners must review policies and procedures that address student-athlete welfare. Within the practice, a good preventive strategy for colleges and universities could be to have detailed policies specifically addressing prescription drug use. Medical staff that work with student-athletes should allow educators to review their policies to make recommendations on specific substances to address. This is particularly important if identified as high-risk substances for abuse by their student-athletes. This is a common practice in the field as a means to address preventive measures related to prescription drug abuse. Additional assessment and screening practices can be effective if implemented in policies and procedures for student-athletes. Despite the progress that has been made, "much more work is needed on prescription stimulant misuse assessment, identifying the extent of the social and economic costs of misuse, monitoring and reducing access, and developing prevention and cessation education efforts" (Sussman, Pentz, Metz, & Miller, 2006, p. 1).

Need for More Education in Relation to Prescription Drug Use

Table 8 in the Appendix I reports information on the responses (N =75) of the sample in relation to examining the need for more education in relation to prescription drug use. There were differences in the responses among the sample within the demographic categories. A higher percentage of student-athletes (92%, n=69) reported no need for additional education in relation to prescription drug use. The remaining 8.0% (n=6) indicated a need for additional education relative to prescription drug use. See Table 8 in Appendix I for a detailed summary by gender, age, sport and academic classification.

In one supportive question, 52% of student-athletes agreed that prescription drug monitoring and education programs needed to be in place, due to their use of prescription drugs. In another question, 26% of student-athletes expressed that there is a difference in the perceived lack of awareness among the sample in relation to prescription drug use. Finally, 26.7% of student-athletes reported a lack of awareness in relation to knowing the different types of painkillers available. See Table 8 in Appendix I.

The reluctance of some student-athletes requesting more education could result in a need for implementing policy mandates within college institutions. The lack of required education within the research sites policy manuals were revealed within documents reviewed.

The documents examined at the research site were two sections of the College Policy Manual Vol. II and Vol. IV, one section of the College Catalog, and the Residential Life Policy, belonging to a small college in the Southeast. Within the athletic department, there were no policy manuals or documents to review that identified any services related to student health and well-being. These three documents were selected for analysis because they contained services related to student health and well-being. The last revision dates of the documents were 2015 through 2017. The College Policy Manual detailed specific policies and services related to Alcohol and Drug Prevention & Counseling, Mental Health Services, and direct Health Services; the College Catalog contained policies related to Mental Health Services; and the Residential Life Policy document provided information on substance abuse and tobacco-free campus policies, in accordance with the College's Alcohol and Drug Policy (see Volume II, Subsection 2.2.2 of the Policy and Procedures Manual). See documents in Appendix II.

The researcher evaluated related sections between all documents. The sections examined related to Mental Health Services (MHS) and the duty to the provided counseling/referral services. Upon evaluation, there was no information on prescription drug regulations or policies identified in either document for students or student-athletes. Experience in the practice of drug abuse and rehabilitation requires policies to monitor any controlled substances distributed to student-athletes within college athletics. The NCAAs Sports Medicine Handbook (2008) outlined state regulations on prescription drug monitoring and safeguards and stated the following:

> State and federal regulations regarding packaging, labeling, record keeping and storage of medications have been overlooked or disregarded, in the dispensing of medications from the athletic training facility. Moreover, many states have strict regulations regarding packaging, labeling, record keeping and storage of prescription and nonprescription medications. Athletics departments must be concerned about the risk of harm to the student-athletes when these regulations are not followed. (p. 21)

The National Association of School Nurses (NASN) (2009), which includes nurses employed in college and university settings, expressed concerns about mandated policy regulations for all schools. It is the position of the NASN that schools develop written medication administration policies and procedures that focus on safe and efficient medication administration at school by a registered, professional school nurse (hereafter referred to as school nurse). Policies should include prescription and non-prescription medications and address alternative, emergency, and

research medication; controlled substances; and medication doses that exceed manufacturer's guidelines (NASN, 2009).

For several years, there have been concerns about maintaining effective policies on drug prevention on college campuses. For example, DeJong and Lagenbahn (1995) stated the "emphasis is on a new doctrine of environmental management, which stresses the school's responsibility to take measures against foreseeable hazards and risks in the school environment. Also stressed is the establishment of sound prevention-oriented policies" (p. 121).

As previously mentioned, there were no specific policies related to prescription drug monitoring in the documents analyzed. Colleges and universities should create mandated policies as a means to remain in compliance with state and federal rules. Nickell (2008) discussed reasons for medication safeguards and outlined policy principles/strategies to assist with maintaining effective prescription drug monitoring.

There have been many reports and allegations from across the country against professional teams and colleges/universities concerning the inappropriate handling of prescription and over-the-counter medications. Nickell (2008) expressed the following:

> State and federal rules and regulations have been violated. In some cases, arrests, fines and citations have been levied. In most cases, those involved have lost their jobs or had their position dramatically changed. If you are currently working as a certified athletic trainer, athletic training student, physical therapist or team physician in an athletic training room (also referred to as an athletic training medical office), it is vital that your facility implement policies and procedures to help manage the handling of prescription

medications. State and federal regulations are applicable whether the facility has an inventory of one medication or an entire team physician pharmacy (p. 2).

CHAPTER V: DISCUSSION

The purpose of this study was to examine the self-report of student-athlete behaviors of related to prescription drug use and athletic staff awareness of preventive measures needed to address prescription drug use. Because limited research specifically related to student-athletes' prescription drug use exists, this study is significant for its potential of identifying preventive measures for drug abusers. Additional research can improve policies and procedures for the overall care of student-athletes. For example, Low and Gendaszek (2010) argued, "there is little recent research on the illicit use of prescription stimulants such as methylphenidate on college campuses" (p. 283). Furthermore, Reardon and Creado (2014) press the need for and importance of more research related to education when they stated that "drug abuse in athletics should be addressed with preventive measures, education, motivational interviewing, and, when indicated, pharmacologic interventions" (p. 95).

This research, as previously stated, was conducted at a small college in the Southeast. Ongoing research is important because small college institutions are on the rise in relation to substance use among student-athletes. A report by the National Collegiate Athletic Association (NCAA) stated that Division III student-athletes reported higher usage rates than student-athletes in Divisions I and II. In some cases (e.g., marijuana), Division III use has reportedly increased while rates in Divisions I and II have remained stable or dropped (NCAA, 2014d). Other factors contribute to the importance of this research. From a demographic perspective, there is limited research on gender as it relates to prescription drug use: "Although gender differences in the use of illicit substances and alcohol have been the subject of extensive research, very few studies

have examined gender differences in nonmedical prescription drug use" (Wastila, Ritter, & Strickler, 2004, p. 1).

Study's Relationship to Social Learning Theory

This study examined areas of prescription drug use among student-athletes in three areas: personal use of prescription drugs, personal knowledge/awareness about prescription drug use, and awareness of the culture of prescription drug use among student-athletes. Guiding the focus of this research, Social Learning Theory (SLT) provides an understanding of how student-athletes may exhibit certain behaviors related to drug use due to influences from their environment. For example, Simons, Conger, and Whitbeck (1988) stated "while the model provides an explanation for initiation into substance use, it is primarily concerned with identifying those factors, which cause adolescents to escalate their involvement with substances" (p. 293).

Research shows that there could be implications that student-athletes might be reluctant to reveal why they exhibit certain behaviors related to illicit substance use. Results of this research study revealed that only seven percent of student-athletes believe that using prescription medications once a week without a prescription is not a problem. Could there be more student-athletes who agree? Taurageau and Yan (2007) reported "sensitive questions are thought to affect three important questionnaire outcomes: (a) overall, or unit, response rates (that is, the percentage of sample members who take part in the survey), (b) item nonresponse rates (the percentage of respondents who agree to participate in the survey but who decline to respond to a particular item), (c) and response accuracy (the percentage of respondents who answer the

questions truthfully)" (p. 862). There are additional implications of SLT through using illicit drugs through observation, which could result in a positive outcome. The fact that four percent of student-athletes reported that, if it helps them resume playing, they believe it is okay to take more medication than prescribed can identify a learned pattern among teammates. Horvath, Misra, Epner, and Cooper (2013) observed that "gambling, smoking pot, and drinking achieved a positive result. The greatest influence are with the people who mattered to us the most" (p. 1). When examining the culture of prescription drug use, 12% of student-athletes have used prescription drugs to perform in their sport.

Social Learning Theory also provided an understanding of how the environment could influence certain behaviors. Bandura (1971) reported in a study that "in the Social Learning system, patterns of behavior can be acquired through direct experience or by observing the behaviors of others" (p. 3). After obtaining the final data and analyzing the association with Social Learning Theory as a theoretical guide for this research study, the culture of drug use among student-athletes revealed some relation to SLT. Table 9 in the Appendix provides an analysis of the questions identifying some of the potential behaviors and influences for student-athletes related to SLT within an athletic culture.

As a practitioner in field of substance abuse, athletes have exhibited behaviors of using prescription pain medications for immediate injury healing without consulting the team doctor. This could support the areas of education in having student-athletes develop a better relationship with medical staff to inform on ongoing injuries. Experience in the field of substance abuse has

also revealed that low percentage responses related to illicit prescription drug use does not mean student-athletes are being truthful about the culture of use.

Additionally, key documents related to health policies for students were analyzed to determine if support services for students, and student-athletes specifically, were available. The final element of the study was administration of the e-questionnaire to 100 (N=75 respondents; 75% response rate) student-athletes. The findings from each level inquiry are presented in the following sections.

Questionnaire

Demographic Profile of the Sample

The target institution was a small Division III institution. Rhodes, Peters, Perrino and Bryant (2008) conducted a study, which contained findings on drug use at a small college, with a majority African-American demographic make-up. They stated, "we believe that the study sample is a major strength of this investigation because so little is known about students attending institutions with a majority African-American population" (p. 58). Additional research, targeting small institutions with this population, increases awareness of potential illicit prescription drug use behaviors, which could challenge the idea that only certain student-athlete populations can be affected by prescription drug misuse. Information obtained from one of the athletic staff persons during an interview expressed that they believed prescription drug abuse is mainly a problem at predominantly larger white college institutions. Perhaps with a more balanced student-athlete population, results would have been different. Different schools in different locations could have different findings.

Awareness Among the Sample in Relation to Prescription Drug Use

To address Research Question (RQ) 1, which examined whether a lack of awareness of prescription drug use exists among the sample, the focus was on "why" was there a significance in difference among the sample in baseball, compared to the category of Other (e.g., competitive cheerleading, softball), where there were some significant differences in prescription drug use by gender, age, and sport. The difference in the reporting is due to baseball having more players on the team to respond to the questionnaire.

After analyzing student-athletes' awareness of prescription drugs, differences arose in gender among the sample. As previously identified as having the highest frequency of significant awareness among the sample, the sport of baseball rated the highest in prescription drug use. Studies have supported such findings of gender differences related to drug use. Flory, Payne, and Benson (2014) reported that "significant risk factors for misuse of stimulant medication include being male" (p. 1).

Differences by age in the culture of prescription drug use were also evident in RQ2. As a practitioner in the field, young student-athletes are exposed to the illicit drug use behaviors of their older teammates. The National Institute on Drug Abuse (2016a) reported that the abuse of prescription drugs is highest among young adults aged 18 to 25. Similar studies have been conducted addressing gender differences in the use of additional drugs. For example, a study implemented by Palmer, McMahon, Mirage, Rounsaville and Ball (2012) revealed:

> Men used marijuana more frequently than women did. The lack of awareness, in relation to prescription drug use, can result in misuse of prescription drugs. Researchers studying nonmedical use of prescription drugs among student-athletes found that "those lacking knowledge about nonprescription analgesics and those using nonprescription analgesics in anticipation of pain or to avoid missing a practice or game were most likely to misuse nonprescription analgesics (p. 25).

Concerns with student-athletes reporting a lack of knowledge in relation to prescription drug use is another focus. Caregivers of student-athletes ae expected to provide as much training as possible, due to the risk of injuries that could require medication therapy. Ongoing prevention programs can have a positive effect on student-athlete awareness. The number of sports within an institution can affect gender differences. Experience working with small colleges have revealed more male dominated sports than female. As a researcher, there should not be any reluctance in implementing drug education programs because of gender differences

Frequency of Prescription Drugs Used Among the Sample

Research Question 2 addressed the sample's frequency of use. The low percentages of student-athletes admitting to prescription medications for non-medical use raise a level of concern of whether student-athletes are being honest with their responses. High-risk behaviors such as student-athletes using someone else's prescription medication, as reported in the questionnaire suggest potential, reckless acts that could create repetitive behaviors from other student-athletes. The data revealed no significant difference in frequency of use by gender, classification, age, or sport. Although there were no significant findings, literature reporting results on gender exists.

The NCAA (2014a) conducted a study specifically assessing reports of drug use by student-athletes. The study reported "substance use is generally higher among male student-athletes. Although similar percentages of male and female student-athletes report using alcohol, men use other social and ergogenic substances at higher rates than women do" (p. 1). Additionally, Wastila, Ritter, and Strickler (2004) conducted research that assessed the nonmedical use of prescription drugs including narcotic analgesics, stimulants, sedative-hypnotics, and minor tranquilizers exceeded the combined use of heroin, crack cocaine, and inhalants (Substance Abuse and Mental Health Services Administration, 1997a). The study revealed that, although research shows that men use drugs at a higher rate, women are prescribed medications at a higher rate, which could make them more vulnerable to prescription drug dependency. Indeed, it is estimated that women are 33% more likely than men to be prescribed a narcotic analgesic and 37% more likely to be prescribed a minor tranquilizer (Wastila, et al., p. 3). Another report in the study concluded, "men are more likely than women to misuse drugs, including prescription drugs" (Wastila, et al., p. 3).

A study conducted by Zickler (2000), through the National Institute on Drug Abuse, found that males are more likely than females to abuse drugs. Research conducted by the National Institute on Drug Abuse (2016c) stated that "there are more men than women in treatment for substance use disorders" (para. 1). Anderson (2001) found "currently, the two leading data sources on substance use National Household Survey on Drug Abuse (NHSDA) and the Monitoring the Future (MTF) study report a greater occurrence of illicit substance use among

males than among females" (p. 286). In addressing the specific use of opioids, men were significantly more likely than women to crush and snort prescription opioids (Back, Lawson, Singleton, & Brady, 2011).

Other scholars that have conducted research in the area of prescription drug misuse suggest that, due to greater access, men have a higher probability for drug misuse. For example, an investigation by Veliz, Ngo, Meier, Durow McCabe, and Boyd (2014) revealed that male adolescents who continually participate in organized sports have higher odds of medical use and misuse of opioid medications. This finding suggests that male athletes may be at a greater risk to misuse opioid medications because of greater access to these medications (Veliz, Ngo, Meier, Durow, McCabe, & Boyd, 2014). These statistical results, predominantly revealing males at a higher rate of use and abuse of prescription drugs, strict monitoring of medication distribution can be helpful. Increased pill-monitoring protocols for all prescription medications are helpful. Experience in the field of substance abuse treatment with student-athletes has found that strict medication distribution protocols reduce the potential for abuse.

Perception of the Culture of Prescription Drug Use in College Athletics

In the present study there were significant findings related to age. The age of student-athletes can play a major role in the decision to use illicit prescription drugs. A study conducted by the Substance Abuse and Mental Health Services Association (SAMHSA) (2014) yielded results that indicated that "the rate of drug use in the past year, related to nonmedical pain reliever use among youth aged 12 to 17, was 6% and for young adults ages 18 to 25, the rate was 11.8%" (p. 1). As reported, there were some differences in the findings related to the age of

student-athletes. As a researcher in the field of prescription drug abuse, student-athletes can display behaviors based on their interaction with certain age groups within their sport. A study by Peralta and Steele (2010) provided an explanation for the relation between the culture of student-athletes and prescription drug use and Social Learning Theory. The authors note:

> Several of the hypotheses for social learning theory and Non-Medical Prescription Drug use (NMPD) use were supported in this study. Our regression models provide some support for social learning theory as at least a partial explanation for NMPD use among college students (39% of the variance in lifetime NMPD use was explained in the social learning need). Results suggest that peer associations influence NMPD use. (p. 883)

Additional studies support the claim that athletes' social interaction affects their decision-making. Tricker (2000) expressed:

> Student athletes' perceptions of societal norms and expectations related to competition, and the degree of control student athletes perceive that they have when deciding to use painkillers, may be important determinants governing the extent to which they may be at risk for abusing these substances. (p. 13)

In the rehabilitation environment of substance abuse treatment that specifically targets prescription drug use, athletes have expressed that they have used medications, particularly pain medications, due to the advice of teammates to treat their injuries. Experience and practice in the field of substance abuse has allowed the researcher to witness these behaviors in student-athletes who do not have a valid prescription to obtain the medication, as seen when counseling athletes.

Prescription Drug Monitoring and Education Programs

In the present study, over ninety percent of the sample indicated that they did not see a need for more prescription drug use education. Moreover, when additional statistical testing was conducted, significant relationships were found between gender, academic classification, and the need for more education in the area of prescription drug use. Gender and classification have not revealed any higher need for preventive education. Previous research has stated that women are exposed to prescription drugs at a higher rate than men. For example, Wastila (2000) suggested that women face greater medical exposure to psychotropic drugs than men do, but more empirical evidence is needed to determine whether women who increase their use of prescription drugs have a greater likelihood of abuse. The awareness of the increased exposure of women to prescription drug use could create a need for more preventive education in this area. For example, Nelson, Kauffman, and Dore (1995) found,

> A larger number of women than men abuse illicit drugs such as tranquilizers, sedatives, psychoactive drugs, hypnotics, and stimulants. Women far exceed men in their medical and nonmedical use of prescription drugs and are more likely to obtain these drugs from legitimate' sources, including physicians" (p. 46).

The identification of women experiencing greater chances of being exposed to the use of prescription medications should bring to light a since of urgency with more education. It is not uncommon for a person who experiences more medical issues to be subject to the possible need for medication therapy. As a practitioner, the information illustrating that women experience

more use of licit and illicit prescription drugs could result in specific gender training and education with female athletes. In spite of the findings of this study, some experts argue for the implementation of additional educational programs. Furthermore, Ruggeri (2008) stated that "athletes need effective prevention programming and health educators must focus on those methods that have been proven to make change" (Slide, 31).

Upon examining the additional testing which addressed the level of importance in the need for more education and prescription drug monitoring programs, there were student-athletes who expressed concern. Although a high percentage of student-athletes reported a need for additional prescription drug monitoring due to their use of prescription drugs, the researcher's practical experience in the field of substance abuse and prevention treatment has revealed student-athletes being reluctant to request more education.

Supplemental Inquiry

Interviews

To assess awareness, practices, and personal beliefs about student-athletes drug use, interviews using opened-ended questions were conducted with two athletic staff members about prescription drug use among student-athletes. The interview schedule consisted of eleven questions. The findings related to common topics in the interviews and personal beliefs and examined the participants' overall thoughts and responses. After reviewing the responses of the interviewees, there were three common topics identified. These topics were:

- Personal beliefs about prescription drug use/monitoring
- Perceptions of use/problems related to prescription drug use
- Attitude about PDMP

Elite interviews. Elites are "people who occupy, by heritage, merit or circumstance, a key place in power networks" (Undheim 2006, p. 14). They possess insight and knowledge through their participative experience and expertise that provide unique insights into key events in history (Richards, 1996). The 'elite' interview format stresses the interviewee's definition of a situation; the interviewee is encouraged to structure the account of the situation and is able to introduce his/her notions of what is most relevant instead of relying on the investigator's notions of relevance (Odendahl & Shaw, 2002). Researchers Merton, Fiske, and Kendall (1990) suggested that elite interviews are characterized by the following qualities: (1) the interviewee is known to have participated in a certain situation or event; (2) the researcher reviews necessary information to arrive at a provisional analysis; (3) the production of the interview guide is based on this analysis; and (4) the result of the interview is the interviewee's definition of the situation. Additionally, Dexter (1970) noted that elite interviews vary, given that the focus is on specialized knowledge that the interviewee possesses.

Interview participants' background. The researcher obtained background information on both interview participants. One athletic staff participant reported that they have been working at the current institution for 21 years. He also has 10 years of direct experience working within athletics as an administrator. He reports no previous experience working at a predominantly white institution (PWI). The other athletic staff reported that he has attended a college that was 50% Caucasian students and 50% African-American as a student-athlete prior to coaching. He was also an assistant at a "small" PWI for 3 years. He reports experience as a

community coach working with diverse populations between the ages of 13 and 18 years old. He has been associated with athletics as a player and coach for 15 years.

Focal Points from Interview

After reviewing the transcript from the two interviews conducted with personnel from the athletic department, three focal points emerged personal beliefs about prescription drug use/monitoring, perceptions use/problem, and attitudes about a PDMP. Each focal point is discussed below.

Personal beliefs about prescription drug use/monitoring. One important observation from talking with the two athletic department administrators was that there was a distance between the two of them as key administrators and the reality of and student-athlete's prescription drug use. They both stated that additional monitoring is needed and that a problem exists. According to studies by the NCAA (2014b) and Wolf, Miller, Pocatello and Barnes (2011), student-athletes have reported illicit use of prescription pain medications.

However, the participants had not witnessed this occurrence or experienced any problems personally. It was if the participants were saying they know it is a problem but not in their world or backyard. In addition, the balance of privacy with protection was a theme: How much protection do we provide before we violate privacy concerns? The study's data reported some evidence of illicit drug use among student-athletes but the interview participants have no knowledge of any reports within their institution. The researcher experienced concern of the interview participants' honesty due to concerns of student-athletes privacy.

Perceptions of use/problems related to prescription drug use. The responses provided by the two interviewees were very broad and unspecific, which could be a function of a lack of knowledge or experience with the issue at hand. One participant expressed the idea that prescription drug use is a problem at larger institutions, and the other participant believed that non-athletes are abusing more prescription drugs than student-athletes are. However, according to the NCAA (2014d), there was an increase in the use of prescription drugs by smaller institutions (Division III) in relation to Division I and Division II programs. Ford's (2008) report echoes one of the participants' perceptions on drug use by identifying that student-athletes are less likely to report prescription drug use than are non-athletes. Concerns in these responses related to knowledge of the interviewee participant's background and experience in working at both small and large institutions. This could have an effect on them assuming that prescription drug abuse only happens at large colleges and/or universities and more prevalent with non-athletes.

Attitudes about a PDMP. Both interviewees had a positive attitude toward the Prescription Drug Monitoring Program (PDMP). The major concern voiced by both administrators was cost. The US Department of Justice (2011) identified the benefits to implementing a PDMP in athletics. The overview provided by the National Alliance for Model State Drug Laws clearly identifies the benefits of a PDMP as a tool used by states to address prescription drug abuse, addiction, and diversion. There were expectations of cost issues in implementing the electronic PDPM due to this study being conducted at a small institution. The researcher was unaware of the financial state of the research site and thus could not

determine whether budget concerns would play a major role in implementing the electronic PDMP. Although one of the interview participants had opinions of prescription drug abuse having more prevalence at larger institutions, it was a positive note that they were both in agreement with implementing the PDMP.

Expectations of the researcher. The researcher expected both interview participants to have knowledge of the Prescription Drug Monitoring Program (PDMP). The researcher expected to hear about or find information on some form of prescription drug monitoring at this institution, related to drug prevention.

There was no information obtained on the professional work experience of the interview participants. This information could have provided the researcher with additional insight into their experience working with diverse populations (student-athletes) and to compare the response in research question ten, which relates to awareness on the cultural use of prescription drugs. One interviewee expressed the idea that predominantly white institutions have a higher prevalence of illicit prescription drug use.

The following section details findings that inform research question five. This section contains data collected from athletic staff responses (interviews) on the need to increase education related to prescription drug use within college athletics. Triangulation is used, as previously cited in the study, with reported information from interviews and questionnaire reports in this section (see Appendix II for responses to the athletic staff interviews).

Summary of Responses to Interview Questions from Athletic Staff

The following information details responses from the interview questions submitted in person by the athletic staff. In this section, awareness of the Prescription Drug Monitoring Programs (PDMP), awareness of prescription drug use by student-athletes, and assessment of the need for more preventive education in the area of prescription drug use were the focal points for the two interviews. Below are the interview participants' responses.

Awareness of PDMP and prevention. There were some common and non-equivalent responses within the sample (questions 1–6) related to the awareness of the Prescription Drug Monitoring Program (PDMP) and preventive measures for student-athletes and prescription drug use. Question 1 stated, "Are you aware of what electronic Prescription Drug Monitoring programs are?" Only one respondent was aware of a PDMP. Question 2 stated, "Do you believe Prescription Drug Monitoring Programs need to be implemented in college sports?" Both interviewees agreed that a PDMP's need to be implemented in college sports. There is evidence that reduction in opioid (painkillers) use is linked to implementing the PDMP. Question 3 stated, "Can Prescription Drug Monitoring Programs help reduce potential criminal activity with individuals' doctor shopping?" Doctor shopping is defined as seeing multiple treatment providers, either during a single illness episode or to procure prescription medications illicitly. Both interviewees responded in the affirmative that a PDMP could help reduce criminal activities of student-athletes such as "doctor shopping." Question 4 asked, "Do you have experience in working with Prescription Drug Monitoring Programs?" Neither of the interviewees had any experience working with PDMPs. Question 5 asked, "Do you

believe this can be an effective tool in establishing more diversion control efforts with prescription drug abuse?" Both interviewees agreed that this could be an effective tool in establishing more diversion control with prescription drug use.

The practice of drug prevention treatment supports programs that reduce the chances of poly-substance use (abusing multiple drugs). Athletes becoming injured and having difficulties returning to the playing field could create episodes of depression. Additionally, this could lead to athletes turning to other mood-altering substances in order to deal with the disappointment of not being able to compete.

Without any practices or policies in place at this research site, there appears to be some violations in following standards as outlined by the NASN. Could this be a common practice at other colleges and universities? Alternatively, could this a problem at small institutions, whom polices are outlined for the entire student body and not specifically for student-athletes

Question 6 asked, "Should any athlete who is prescribed pain medications be subject to periodic Prescription Drug Monitoring checks?" There was disagreement between the interviewees about conducting a Prescription Drug Monitoring check on any athlete prescribed medication. One interviewee stated yes and the other stated no. The difference in this response was due to confidentiality concerns. The researcher found that there was strong disagreement concerning an athlete's personal medication history being exposed and creating a stigma among his or her teammates. The interview participants were concerned with exposed medication information because of the PDMP. This is a legitimate concern that can

affect a person's desire to seek treatment, but there are confidentiality laws to protect an individual's health care information.

PDMPs are statewide electronic databases that track the prescribing and dispensing of controlled substances, including patients who might be seeking prescriptions from multiple doctors ("doctor shopping"). Yurkanin (2015) stated that "prescription drug monitoring programs allow doctors to see whether patients in their care have received controlled substances from other medical providers. They can help doctors identify patients who might be abusing prescription drugs, or doctor shopping to get more pills to sell on the black market" (p.1)

Awareness and cultural acceptance. There were some common and non-equivalent responses in the sample (questions 7–11) related to awareness of student-athletes' drug use and cultural acceptance. Question 7 asked, "Have you experienced any issues of athletes reporting any abuse of prescription drugs?" Neither respondent has experienced any issues of athletes reporting prescription drug abuse. Question 8 asked, "Do you believe that this is a problem on college campuses?" The sample was not in agreement with prescription drug use being a problem on college campuses. Question 9 asked, "Are there any current programs for prescription drug education implemented at this university at this time?" Both respondents reported no programs for prescription drug education on their campus at this time. Question 10 asked, "Do you believe that there is a cultural acceptance of prescription drug use within college athletics?" There were similarities that drug culture is prevalent but not accepted on college campuses. Some cultural relations to athletes' drug use coincide with Social Learning Theory.

Finally, Question 11 asked, “Do you believe that it is difficult to monitor prescription drug use among student-athletes?” Both respondents agreed that it is difficult to monitor prescription drug use among student-athletes. Additionally, both interviewees agreed that student-athletes have alternative ways to obtain prescription medications, which causes difficulties in monitoring their behavior.

Athletic staff were interviewed to obtain their knowledge of preventive measures to address prescription drug use among college athletes and to examine both their outlook on preventive measures that could be implemented in college athletics and their awareness of drug use among their athletes. Although the athletic staff interviewed expressed concern with the ability to monitor athletes’ drug use, research has identified that the Prescription Drug Monitoring Program (PDMP), if implemented, can be effective and used by the appropriate staff. The athletic staff’s response on being able to monitor student-athletes drug use, raises more concerns form the researcher that they have no awareness of the effectiveness of the PDMP.

Document Review

The second supplemental method used in this research study was document review. This was administered as a means to review any forms/documents that examine both the student-athletes’ well-being and protocols for any drug awareness programs/treatment put in place at the identified site. The Center for Disease Control states, “document review is a way of collecting data by reviewing existing documents. The documents may be internal to a program or organization” (p.1). In addition, Bowmen (2009) stated the following related to document

review, “Document review involves skimming (superficial examination), reading (thorough examination), and interpretation” (p. 32). One reason the researcher selected this method of data collection was the accessibility of the information. Witkin and Altschuld (1995) reported that, “the document review process can be done independently, without needing to solicit extensive input from other sources” (p. 1). Tellis (1997) stated the following regarding documents reviews:

> Documents could be letters, memoranda, agendas, administrative documents, newspaper articles, or any document that is germane to the investigation. In the interest of triangulation of evidence, the documents serve to corroborate the evidence from other sources. Documents can lead to false leads, in the hands of inexperienced researchers, which has been a criticism of case study research. Documents are communications between parties in the study, the researcher being a vicarious observer; keeping this in mind will help the investigator avoid being misled by such documents. (p. 11)

The documents reviewed for this study were 1) College Policy Manual Vol. II section 2.2.2.6 Alcohol and Drug Abuse Prevention and Counseling, 2) College Policy Manual Vol. V section 5.4.9.1 Mental Health Services, and 3) College Catalog 2015-2017 section on Mental Health Services. These documents were the only forms available that outlined any information related to services, programs, and institutional regulations for the students enrolled. However, a mandate by the National Association of School Nurses expressed mandates for all policies and regulations pertaining to prescriptions drugs for schools. Upon completing the document analysis, it was revealed that there was no specific information in the institution’s College Catalog nor the Policy Manual that addressed substance abuse services specifically for student-

athletes. However, there was mention of referral sources that could be coordinated for students as needed. All services related to substance abuse treatment were outsourced through another provider for all students enrolled in the institution.

Implications and Recommendations

The aim of this study was to examine behaviors of student-athletes related to prescription drug use and athletic staff awareness of preventive measures within a small institution. Upon examining the study results, the goal was to apply any needed recommendations for preventive services focusing on drug awareness and prevention. Yusko, Buckman, White, and Pandia (2008) reported that the "development of prevention programs that are specifically designed to meet the unique needs of the college student athlete may be beneficial" (p. 1). Establishing proactive strategies for drug prevention programs should not require a large number of student-athletes to be in need of additional education. Athletes who feel that they are not receiving effective care and education should express their concerns in order to have additional prevention programs. Experience as a practitioner while providing direct prevention services in the field, has directly been involved with situations where the death of one student-athlete related to prescription drug overdose, has affected college sports. Student-athletes directly associated with this incident-raised concerns on whether they are educated enough on proper use of prescription drugs, when taking prescription pain medications due to injuries. The reports of prescription drug use with medications that require a doctor's prescription should lead to active prevention measures within the research site.

The lack of information within policy manuals could require institutions to examine their protocols for student-athlete services and care. Athletic staff could also examine whether they are maintaining standards for training and awareness of substance abuse prevention measures. College institutions can implement yearly awareness programs for athletic staff and faculty involved with student-athletes. Implications that the perception of prescription drug use happens only at certain institutions, as reported in the interviews, could reveal that more education could benefit athletic staff.

In the field of sport management, colleges and universities can implement preventive drug abuse courses within their major curriculums. Practitioners can engage student-athletes in drug education programs/courses and assist them in making healthy decisions. This strategy can potentially help reduce drug dependency and high addiction rates.

Moreover, athletic departments can provide additional training for their staff (coaches, trainers, team doctors) in the areas of medication monitoring, drug dependency/addiction, and peer support programs. Colleges and universities can also model other institutions' drug awareness programs and policies. The U.S. Department of Education (2008) awards college programs who have succeeded in the delivery of drug prevention services on their campuses. Since 1999, $3.4 million dollars have been given to institutions of higher education in recognition of their programs. This financial assistance opportunity can help diminish the concern of cost, as mentioned in the interviewee's response. Because there is a concern of cost in

implementing the PDMP, it is hopeful that the athletic staff will become more aggressive in seeking outlets for financial assistance.

The institution site where this study was conducted could benefit from creating a positive influence on deterring drug use. Upon examining forms during the document review, there was no detailed information on strategies to improve the campus's culture on drug use. The information in the college's policy manual and catalog only provided students with a brief outline of services offered (see Appendix I). If small institutions are providing limited information in their college catalogs/manuals related to drug prevention services for student-athletes, this could create concerns of student-athletes well-being with addressing substance abuse issues in college sports. Below are a series of policy improvements suggested by the U.S. Department of Education (2008) that relate to substance abuse prevention programs:

- Eliminating alcohol industry support for athletics programs (accepting such funding can be seen as sending a mixed message to students);
- Disciplining repeat offenders and those who engage in unacceptable behavior associated with substance use; and
- Launching a media campaign to inform students about the actual amount of drinking that occurs on campus, since most students overestimate the number of their classmates who drink and the amount that they drink (pp. 4-5).

The size of a college or university should not limit the services needed for student-athlete well-being. Although there are financial concerns that limit some colleges' ability to provide needed services, federal programs are in place to support initiatives for drug prevention under the U.S. Department of Education.

Recommendations

Based on the results of this study the researcher offers several recommendations that can positively impact athletic programs. First, student-athletes should be educated about the high risk transition phase of using prescription drugs and how it turns into drug abuse. This strategy can be accomplished by implementing policies that mandate substance abuse prevention education into the classroom, not just within the confines of the locker room. Second, implementing policies that require student-athletes to reveal all medications that are taking prior to athletic participation is essential to the implementation of an effective PDMP. This can prevent potential counteractions with other prescription medications. Third, medical staff employed by institutions such as the school in this study should be aware of student-athletes who exhibit high-risk behaviors that emanate from a history of prescription drug abuse. Initial awareness of any drug use can promote proactive policies and procedures. Fourth, there is a great need for more development and implementation of policies and procedures that govern prescription drug use on college campuses. This is especially important for smaller institutions because of a support infrastructure that is also smaller. Information obtained from the two athletic staff interviewed as a part of this study suggested that this could be a problem at other colleges of similar size. Finally, more focus on drug education initiatives for managing prescription drug use can contribute to student-athlete's well-being.

Collaboration on policy development with team doctors, prevention specialist, and athletic staff is an imperative. Athletic support staff must be very proscriptive in outlining an effective plan of action for structured drug abuse and awareness programs. These educational plans should be outlined on a structured evidence based curriculum, with trained staff to

implement the services. Moreover, the researcher highly suggested that institutions such as the one under study follow the list of policy strategies/principles recommended by Nickel (2008):

- Develop an ongoing revision of a Policy and Procedure Manual (PPM);
- Follow federal regulations for controlled substances;
- Identify proper chain of command;
- Maintain proper records;
- Monitor for expired or contaminated medications;
- Correct label designation;
- Secure prescription medications; and
- Account for sample medications (pp.3-5).

Limitations

Several limitations are noted when reviewing the results of this study. The first limitation relates to the small amount of literature available on the topic of illicit drug use by student-athletes. Needless to say this is a hypersensitive area. Sawyer (2012) reported, "Illicit drug usage at some colleges and universities is a topic of limited research" (p. 159). Back, Payne, Simpson, and Brady (2010) reported in a study that "little is known about gender differences in prescription opioid misuse and dependence" (p.1). These two studies identify the constraints to finding literature on the topic.

A second limitation of the study is anchored in the concern over whether some student-athletes may be uncomfortable or unwilling to share information that reflects poorly on them in their social environment, even if they know their responses are entirely anonymous. Self-

selection bias can affect questionnaire responses. Tourangeau and Yan (2007) stated that "questionnaire questions about drug use, sexual behaviors, voting, and income are usually considered sensitive; they tend to produce comparatively higher nonresponse rates or larger measurement error in responses than questions on other topics" (p. 860).

Furthermore, respondents could present with a self-evaluation bias. Student-athletes who participated in this questionnaire could have adjusted their answers by self-reported measures to better reflect how they "think they should be" rather than how they actually behave. Tourangeau and Yan (2007), commenting on what happens when sensitive questions are used in questionnaire, stated the following:

> Sensitive questions are thought to affect three important questionnaire outcomes. Overall, or unit, response rates (that is, the percentage of sample members who take part in the questionnaire), item nonresponse rates (the percentage of respondents who agree to participate in the questionnaire but who decline to respond to a particular item), and response accuracy (the percentage of respondents who answer the questions truthfully). Sensitive questions are suspected of causing problems on all three fronts, lowering overall and item response rates and reducing accuracy as well. (p. 862)

A third limitation relates to the problem of some student-athletes were involved in multiple sports at the institution under study. This limits the reporting on the number of student-athletes responding to specific sports. Although student-athletes were given a choice to participate in the study, after reading the consent form, risk of disclosure could have affected their desire to complete the questionnaire. Couper, Singer, Conrad, and Groves (2008) found that concerns about privacy and confidentiality reduce participation in questionnaires.

Because of confidentiality concerns, limited exposure to the university's identity affects the discussion on certain findings among the research questions. Data collected within this study revealed limited significant findings among student-athletes' gender, classification, age, and sport. However, research studies found that student-athletes at specific colleges, which the researcher was not able to identify, have differences in drug use among student-athlete demographics.

A fourth concern relates to the limited number of staff in the athletic department to interview. Only two athletic staff members were available to participate in this study. No other individuals with direct contact as caregivers to student-athletes were available to be interviewed. Additional interviews could have provided more insight on awareness and culture of student-athletes' behaviors related to prescription drug use. In addition, the researcher could have obtained information on their (additional interviewees) awareness of preventive measures potentially needed for student-athletes. Finally, due to the study design and sample size, the results cannot be generalized to student-athletes competing in NCAA Division I-III institutions. The researcher believes that it may serve as a small representation of what may be happening with student-athletes and prescription drug use and education.

Future Research

This research, as previously stated, was conducted at a small college in the Southeast. Although there has been previous research on small college institutions, additional research can be vital in improving prevention programs within the profession of sport management. For example, Low and Gendaszek (2010) conducted a study surveying undergraduates at a small

college in the USA on their use of both legal and illegal stimulants. The data revealed that "35.5% of undergraduates who were convenience sampled had used prescription amphetamines illicitly (defined as use without a prescription), with men reporting more use than women" (p. 283). Ongoing research is important because small college institutions are on the rise in relation to substance use among student-athletes. A report by the NCAA revealed, "Division III student-athletes reported higher usage rates than seen among student-athletes in Divisions I and II. In some cases, Division III use has reportedly increased while rates in Divisions I and II have remained stable or dropped" (NCAA, 2014d, para. 3). This report also stated "self-reported substance use is highest among Division III student-athletes" (para. 3), although this report did not identify whether there was less drug testing conducted at these institutions.

Future research might include an analysis of different demographic areas of student-athletes in relation to their behaviors, culture, use, and awareness of prescription drugs. Demographic analysis could be successful in examining whether one sport or gender has a higher illicit drug use rate. Another consideration would be to conduct program analysis to examine drug prevention protocols from different college institutions. This could allow the researcher to provide future research sites with credible data on procedures that could assist in structuring their drug prevention programs. As there is a continued concern about the limitations of specific research targeting student-athletes and prescription drug use, the practice of prevention education can be implemented with several different populations, not just high-risk injury sports.

Another key area to focus on in future research are the gender differences in drug use. Zickler (2000) found that according to Cora Lee Wetherington, NIDA's Women and Gender

Research Coordinator understanding the differences in opportunities to use drugs may also help shape prevention efforts. In addition, assessing prescription drug use and gender differences can suggest future developments in therapeutic interventions. Commenting on gender differences in prescription drug use, Back, Payne, Simpson, and Brady (2010) noted that "there are significant gender differences in several predictors of non-medical use and abuse/dependence and suggest potential avenues for enhancing the design of gender-sensitive prevention and treatment efforts" (p. 4).

Conclusion

This research was conducted at a small Southeastern college. Ongoing research is important because small college institutions are on the rise in relationship to substance use among student-athletes. Adequate preventive measures can help reduce the potential for prescription drug abuse.

One important demographic in the sample was the significant difference in age as it relates to awareness of prescription drug use. That could be expected due to younger athletes transitioning to college and not having previous education about prescription drug use. Despite the data, which identifies a difference in awareness of prescription drug use among the sample, individuals working with student-athletes may not be able to assume that prescription drug use is prevalent. There were higher numbers in frequency by gender in relation to prescription drug use. Low significance in relation to age and frequency of use does not compare to the national studies. NIDA (2016), as previously reported in this study, states that "non-medical use of prescription medication is highest among young adults aged 18–25" (p. 1). It was identified that

one particular sport had a high response in frequency of prescription drug use. Having a significant response rate in frequency of drug use in only one sport should not limit the urgency in implementing drug prevention education among the entire student-athlete population. Despite the culture of drug use within college sports as an accepted trend, surprisingly there was no significance within the sample in the area of gender, classification, or sport.

As determined through the interviews conducted, there is evidence of additional services needed that can assist in reducing illicit drug behaviors and abuse. The lack of awareness pertaining to the Prescription Drug Monitoring Program was a concern. If there are no preventive measures in place, the potential for abuse can increase. Updating policy manuals can be effective in providing a visual tool for the student-athletes' and the athletic staff's expectations on drug prevention strategies. This study explored the prevalence of prescription drug use among one group of student-athletes. Again, due to the sample size, it should be stated that the results couldn't be generalized to student-athletes competing in NCAA Division I-III institutions; it represents a "snapshot" of what might be occurring.

Farleman (2016) stated that "because student-athletes are less likely to seek help when dealing with stressors, being proactive in having services and programs in place can curb high-risk behaviors and illicit drug use" (p. 1). Providing education for athletic staff is very important. Wolfe, Miller, Pescatello, and Barns (2011) discussed how a lack of instruction by team physicians increases the likelihood that an athlete will use more of a medication than the recommended dose. This study revealed that there is statistical data that supports the potential need for implementing prescription drug education that targets athletic staff and student-athletes related to prescription drug awareness, in the area of gender, age, and sport.

There could be more proactive deterrents related to substance abuse awareness. The unfortunate deaths of college athletes related to prescription drug abuse, as previously discussed in this study, could create a sense of urgency for athletic programs to address this issue from a proactive view rather than being reactive to student-athletes reporting issues of drug abuse and addiction. This research could also direct more focus to educating athletic staff on the behaviors associated with identifying athletes who are experiencing problems with prescription drug abuse/addiction. One death related to prescription drug overdose among student-athletes has drastic emotional effects within the collegiate sporting arena. Athletes could continue to take risks in order to perform and deal with physical pain, with the potential result of drug abuse and addiction. Reardon and Creado (2014) reported that "athletes might turn to substances to cope with numerous stressors, including pressure to perform, injuries, and physical pain" (p. 95). With an understanding that this research offers additional insight on the potential for prescription drug abuse, college athletic departments might be encouraged to structure substance abuse programs that specifically target prescription drug prevention.

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APPENDICES

Appendix I: Tables

Table 1

Summary of Data Analysis Procedures

Research questions	Analysis procedures
RQ1: Is there a difference in the perceived lack of awareness among the sample in relation to prescription drug use?	t-test; one-way ANOVA; f and %
RQ2: How frequently are prescription drugs used among the sample?	*f* and %
RQ3: Among the sample population, what is the level of awareness about the culture of prescription drug use in college athletics?	*f* and %
RQ4: Is there a need for more prescription drug monitoring and education programs for student-athletes?	*f* , % and χ^2

Table 2

Reviewed Documents from Target Institution

Documents	Related services	Prescription drug services offered
College policy manual: Document 1	Community MHS (Offered 2x week)	None
College catalog: Document 2	Community MHS (As needed)	None
Residential life policy: Document 3	Access to counseling and referral services to students (As needed)	None

Table 3

Demographic Profile of the Sample (N=75)

Variable	*f*	%
Gender		
Male	43	57.3
Female	32	42.7
Total	75	100.0
Age		
18-20	37	49.3
21-24	38	50.7
Total	75	100.0
Race		
Black/African American	65	86.7
Native American or Pacific Islander	2	2.7
White	4	5.3
Latino/Hispanic	3	4.0
Other	1	1.3
Total	75	100.0
Academic classification		
Freshman	13	17.3
Sophomore	20	26.7
Junior	23	30.7
Senior	19	25.3
Total	75	100.0
Sport		
Basketball	27	36.0
Baseball	19	25.3
Track and field	11	14.7
Other	18	24.0
Total	75	100.0

Table 4

Agreement on Knowledge about Prescription Drug Use (N=75)

Statement	Response	*f*	%
I feel knowledgeable about the different types of painkillers.	Strongly disagree	1	1.3
	Disagree	20	26.7
	Neither agree or disagree	22	29.3
	Agree	28	37.3
	Strongly agree	4	5.3
	Total	75	100.0

Table 5.1

Frequencies and Percentages-Personal Use of Prescription Drug Subscale (N=75)

Statement	Never *f*(%)	Once *f*(/%)	Rarely *f*(/%)	Occasionally *f*(/%)	Sometimes *f*(/%)	Often *f*(/%)	Always *f*(/%)
I have used prescription drugs for nonmedical use.	61(81.3)	10(13.3)	1(1.3)	0(0.0)	3(4.0)	0(0.0)	0(0.0)
I have used prescription drugs illegally at parties.	69(92.0)	5(6.7)	0(0.0)	0(0.))	1(1.3)	0(0.0)	0(0.0)
I have used prescription drugs with alcohol.	63(84.0)	7(9.3)	2(2.7)	3(4.0)	0(0.0)	0(0.0)	0(0.0)
I have snorted prescription drugs for nonmedical use.	75(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
I have injected prescription drugs for nonmedical use.	75(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
I have taken prescription drugs to feel better without having an injury.	63(84.0)	10(13.3)	1(1.3)	0(0.0)	1(1.3)	0(0.0)	0(0.0)
I have taken prescription drugs for nonmedical to perform in my sport.	63(84.0)	9(12.0)	1(1.3)	0(0.0)	2(2.7)	0(0.0)	0(0.0)
I have taken painkillers when I was in pain without having a prescription.	39(52.0)	20(26.7)	3(4.0)	4(5.3)	6(8.0)	2(2.7)	1(1.3)
I have taken prescription painkillers drugs to get high.	68(90.7)	6(8.0)	0(0.0)	1(1.3)	0(0.0)	0(0.0)	0(0.0)
I have been offered prescription drugs by other students.	48(64.0)	1(1.3)	2(2.7)	15(20.0)	8(10.7)	1(1.3)	0(0.0)
I have taken someone else's prescription medication.	54(72.0)	18(24.0)	0(0.0)	0(0.0)	3(4.0)	0(0.0)	0(0.0)
I have purchased prescription drugs from other students.	73(97.3)	1(1.3)	0(0.0)	1(1.3)	0(0.0)	0(0.0)	0(0.0)
I have sold prescription drugs to other students.	75(100.)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
I have given prescription drugs to other students.	67(89.3)	3(4.0)	1(1.3)	1(1.3)	3(4.0)	0(0.0)	0(0.0)
I have been pressured into letting someone else have my prescription medication.	60(80.0)	9(12.0)	1(1.3)	2(2.7)	3(4.0)	0(0.0)	0(0.0)

Table 5.2

Summary of Additional Statistical Testing RQ2

Variable	Test	Result	p-value
Gender	*t*	*t*=(73)= 2.37	.03*
Age	*t*	*t*=(73)= -2.23	.03*
Sport	One-way ANOVA	F=(3, 71)	.001**
Academic classification	One-way ANOVA	F=(3, 71)	.13

*p <.05

**p <.001

Table 6

Frequencies and Percentages-Level of Agreement About the Culture of Prescription Drug Use (N=75)

RQ3/Statement: Among the sample population, what is the level of agreement about the culture of prescription drug use?	Strongly disagree *f*(%)	Disagree *f*(%)	Neither agree/ disagree *f*(%)	Agree *f*(%)	Strongly agree *f*(%)
Students believe it is okay to take more medication than prescribed if it helps them resume playing in their sport.	20(26.7)	13(17.3)	29(38.7)	9(12.0)	4(5.3)
Prescription drug use on college campuses is a problem.	15(20.0)	22(29.3)	24(32.0)	5(6.7)	9(12.0)
I know students who use prescription drugs with alcohol.	23(30.7)	17(22.7)	27(36.0)	6(8.0)	2(2.7)
I know athletes who snort prescription drugs.	70(93.3)	2(2.7)	2(1.3)	2(2.7)	0(0.0)
Some athletes hide their prescription medication so that no one else will take it.	61(81.3)	5(6.7)	4(5.3)	3(4.0)	2(2.7)
I know athletes who purchase prescription drugs from other people.	54(72.0)	9(12.0)	9(12.0)	2(2.7)	1(1.3)

Table 7

Importance of the Need for More Education on Prescription Drug Use (N=75)

Statement	Response	*f*	%
How important to you is providing more education on prescription drug use?	Not important	2	2.7
	Slightly important	1	1.3
	Neutral	6	8.0
	Moderately important	7	9.3
	Very important	20	26.7
	Extremely important	39	52.0
	Total	75	100.0

Table 8

Crosstabs Select Demographic Variables by Need for More Education on Prescription Drug Use (N=75)

Variable	Yes/No	Count/%	Category	Category	Category		
Gender							
			Male f(%)	*Female f(%)*			*Total*
Do you feel as if there is a need for more education on prescription drug use?	No	Count % within	37(53.6)	32(46.4)			69(100.0)
	Yes	Count % within	6(100.0)	0(0.0%)			6(100.0%)
Total		Count % within	43 (57.3)	32(42.7)			75(100.0)
Age							
			18-20 f(%)	*21-24 f(%)*			*Total*
Do you feel as if there is a need for more education on prescription drug use?	No	Count % within	34(49.3)	35(50.7)			69(100.0)
	Yes	Count % within	3(50.0)	3(50.0)			6(100.0)
Total		Count % within	43(57.3)	32(42.7)			75(100.0)
Sport area							
			Basketball f(%)	*Baseball f(%)*	*Track f(%)*	*Other f(%)*	*Total*
Do you feel as if there is a need for more education on prescription drug use?	No	Count % within	26(37.7)	15(21.7)	10(14.5)	18(26.1)	69(100.0)
	Yes	Count % within	1(16.7)	4(66.7)	1(16.7)	0(0.0)	6(100.0)
Total		Count % within	27(36.0)	19(25.3)	11(14.7)	18(24.0)	75(100.0)

Table 8 (continued)

Variable	Yes/No	Count/%	Category	Category	Category		
Academic classification			*Freshman f(%)*	*Sophomore f(%)*	*Junior f(%)*	*Senior f(%)*	*Total*
Do you feel as if there is a need for more education on prescription drug use?	No	Count % within	10(14.5)	20(29.0)	20(29.0)	19(27.5)	69(100.0)
	Yes	Count % within	3(50.0)	0(0.0)	3(50.0)	0(0.0)	6(100.0)
Total		Count % within	13(17.3)	20(26.7)	23(30.7)	19(25.3)	75(100.0)

Table 9

Implications/Findings Related to Social Learning Theory

Potential social learning influence	Strongly agree *f*(%)	Agree *f*(%)
1. Using prescription drugs once a week without a doctor's prescription is harmless.	7(9.3)	5(6.7)
2. Using prescription drugs daily without a doctor's prescription is harmless.	5(6.7)	6(8.0)
3. Prescription drugs are safer than marijuana.	11(14.7)	17(22.7)
4. Prescription drugs are safer than alcohol.	17(22.7)	14(18.7)
5. Using medications that do not belong to me is not harmful.	7(9.3)	2(2.7)
6. If I am in pain, it is okay to use another persons' medication one time.	4(5.3)	3(4.0)
7. If you have permission from another person, it is okay to use his or her medication.	1(1.3)	2(2.7)
8. Students believe it is okay to take more medication than prescribed if it helps them resume playing in their sport.	4(5.3)	9(12.0)
9. I know athletes who purchase prescription drugs from other people.	1(1.3)	2(2.7)
10. I know athletes who use other people’s medications.	1(1.3)	4(5.3)

Appendix II: Documents

Recruitment Statement from the Primary Investigator

My name is Marcus Amos. I am a graduate student at the University of Tennessee and an assistant professor of Sport Management at Voorhees College. I am requesting your participation in completing a questionnaire related to student-athlete welfare & health related to services within the athletic department, focused on assessing prescription drug use among student-athletes. This is a voluntary questionnaire and at any time, you are allowed to decline to participate. No names will be attached to the questionnaire. Your responses will be very anonymous. Voorhees College Department of Athletics has granted permission to me to conduct the research.

Interview Questions for Athletic Staff

All your responses to the questions below are anonymous and kept confidential. Please answer each question honestly and to the best of your knowledge.

1) Are you aware of what electronic Prescription Drug Monitoring systems are? Yes or No. If so, please explain. [Principal Interviewer will explain what Prescription Drug Monitoring Programs are if the participant is unaware]

2) Do you believe Prescription Drug Monitoring Programs need to be implemented in college sports? Yes or No: Please provide additional comments if needed

3) Can Prescription Drug Monitoring Programs help reduce potential criminal activity with individual's doctor shopping? Yes or No: Please provide additional comments if needed

[Principal Interviewer will explain definition of 'Doctor Shopping' if the participant is unaware]

4) Do you have experience in working with Prescription Drug Monitoring Programs? Yes or No Please provide additional comments if needed

5) Do you believe this can be an effective tool in establishing more diversion control efforts with Prescription Drug Abuse? Yes or No: Please provide additional comments if needed

6) Should any athlete prescribed pain medications be subject to periodic Prescription Drug Monitoring checks? Yes or No: Please provide additional comments if needed

7) Have you experienced any issues of athletes reporting any abuse of prescription drugs? Yes or No.

8) Do you believe that this is a problem on college campuses? Yes or No: Please elaborate if needed.

9) Are there any current programs for prescription drug education implemented at this university at this time? Yes or No.

10) Do you believe that there is a cultural acceptance of prescription drug use within college athletics? Yes or No: Please explain.

11) Do you believe that it is difficult to monitor prescription drug use among student-athletes? Yes or No. Please explain.

Informed Consent Form for Athletic Staff

Introduction
You are invited to participate in a research study regarding prescription drug use among student-athletes. This research study has three purposes: (1) assess effective ways to minimize prescription drug abuse among student-athletes; (2) increase awareness on safe prescription drug use among student-athletes; (3) identify high risk behaviors that could result into prescription drug abuse among student-athletes.

Information on Participants Involved in this Study
Participants will participate in a research study that will take place for approximately twelve months. At a time and place of your choosing, you and the researcher will take part in an unstructured interview, lasting approximately one to two hours. The interview will be recorded via an iPad Mini or the E-cam Call Recorder program. You can also choose to decline any audio use and request that your responses to the questions be manually typed. After the interview is completed, and if you consent to your responses being recorded, a professional transcriber will transcribe the audio recording of our conversation. After transcription is finished, the researcher will review the transcripts, noting commonalities and themes in multiple interviews, including yours. The academic community will share findings with you before the researcher submits his findings for publication and review.

Risk
There are minimal risk to participating in this study. Breach of confidentiality is a possible risk related to the research. To minimize any potential for risk, and protecting the participant's identity, the following actions will occur:

- Pseudonyms will be used when refereeing to your comments
- The audio recordings will be stored on a flash drive, and the flash drive will be securely stored in a lockbox.
- If your responses to the questions are manually typed during the interview, the information will be stored on a flash drive securely stored in a lockbox.
- No visual recording of video conferences will take place.
- Upon completion of the study, the audio recordings will be destroyed.

Benefits
There are no anticipated direct benefits to you resulting from your participation in the research. The following are potential benefits for participating in this study:

- You may experience positive emotions and gain understanding after reflecting upon your past experiences as a sort official.
- New research will be added to the body of knowledge regarding prescription drug use among student-athletes.

_____ Participant's Initials

Confidentiality
Data will be stored securely in a locked file cabinet in my office at Voorhees College and will be made available only to the researcher and others involved in the study unless you specifically express otherwise in writing. No references will be made in oral or written reports that could link participants to the study.

Contact Information
If you have questions at any time about the study or the procedures, (or you experience adverse effects as a result of participating in this study,) you may contact the primary researcher, Marcus Amos, at 1400 Andy Holt Avenue, Knoxville, TN, 37996, and 865-974-3340. If you have questions about your rights as a participant, contact the University of Tennessee IRB Compliance Officer at (865) 974-7697 or email at utkirb@utk.edu.

Participation
Your participation in this study is voluntary; you may decline to participate without penalty. If you decide to participate, you may withdraw from the study at any time without penalty and without loss of benefits to which you are otherwise entitled. If you withdraw from the study before data collection is completed your data will be returned to you or destroyed.

Consent
I have read the above information. I have received a copy of this form. I agree to participate in this study.

Participant's signature _____ Date _____

Investigator's signature _____ Date _____

On-line E-Questionnaire Consent Form for Student-Athletes

Introduction

You are being invited to participate in a research study titled "*A Knowledge Assessment of Prescription Drug Use among Student-Athletes at a College in the Southeast*." Marcus Amos, a third year doctoral student in sport management at the University of Tennessee-Knoxville, is conducting this study. You were selected to participate in this study because you are a student-athlete at a [redacted]

The objectives of this study are to: 1) determine if more prescription drug monitoring and educational programs are needed due to the rising use of prescription medications by student-athletes; 2) to assess the lack of education among student-athletes in relation to prescription drug use, 3) and to examine the cultural perception of prescription drug use in college athletics among student-athletes**.**

Introduction about Participants Involved in the Study

Participants in this study will be student-athletes, both male and female at [redacted]. If you agree to take part in this study, you will be asked to complete an online e-questionnaire with four sections. This questionnaire will ask about your: (1) knowledge of prescription drug use; (2) Awareness of prescription drug use among student-athletes; and opinion about whether more prevention measures are needed to monitor prescription drug use in college sport. In the final section you will be asked to provide some basic demographic information. This questionnaire will take approximately15 minutes to complete.

Risk

The risks associated with participating in this study are minimal. For example, you might experience a level of discomfort when asked to respond to some of the questions in the questionnaire. To the best of our ability your answers in this study will remain confidential. We will minimize any risks by not allowing any identifiable information to be attached to your questionnaire. Your responses to the questions will be maintained on a password secure computer which will be stored in a lock box in [redacted] Only the Principal Investigator (PI) and the PIs faculty advisor will have access to the questionnaire information.

Benefits

You may not directly benefit from this research; however, we hope that your participation in the study may provide you with insight on the importance of prescription drug education and understanding the concern for high risk behaviors associated with prescription drug misuse.

Confidentiality

Data will be stored securely in a locked file cabinet in my office at [redacted] and will be made available only to the researcher and others involved in the study unless you specifically express otherwise in writing. Data files will be assigned to a numeric code to protect your identity and no references will be made in oral or written reports that link your participation to the study.

Emergency Medical Treatment

The University of Tennessee does not "automatically" reimburse subjects for medical claims or other compensation. If physical injury is suffered in the course of research, or for more information, please notify the investigator in charge (Marcus Amos, mamos3@vols.utk.edu, 505-319-4041).

Contact Information

Your participation in this study is completely voluntary and you can withdraw at any time. If you have any questions at any time about the study or the procedures, requirements (or you experience adverse effects as a result of participating in this study), contact the Principal Investigator Marcus Amos (mamos3@vols.utk.edu) or Steven Waller, Ph.D. (swaller2@utk.edu) at 865-974-1279. If you have any questions about your rights as a participant, contact the University of Tennessee, IRB Compliance Office at 865-974-3466 or email at utkirb@utk.edu.

Consent

By clicking “I agree” below, you are indicating that you have read and understood this consent form and agree to participate in this research study. Please print a copy of this page for your records.

I Agree

I Do Not Agree

Research Questionnaires for Student-Athletes

All your responses to the questions below are anonymous and kept confidential. Please answer each question honestly and to the best of your knowledge.

Section I – Personal Use of Prescription Drugs

Please answer each of the following questions about athletes' use of prescription drugs using the scale below ranging from never to one time.

1. I have used prescription drugs for nonmedical use

   - Never
   - Onetime
   - Rarely
   - Occasionally
   - Sometimes
   - Often
   - Always

2. I have used prescription drugs illegally at parties

   - Never
   - Onetime
   - Rarely
   - Occasionally
   - Sometimes
   - Often
   - Always

3. I have used prescription drugs with alcohol

   - Never
   - Onetime
   - Rarely
   - Occasionally
   - Sometimes
   - Often
   - Always

4. I have snorted prescription drugs for nonmedical use

- Never
- Onetime
- Rarely
- Occasionally
- Sometimes
- Often
- Always

5. I have injected prescription drugs for nonmedical use

- Never
- Onetime
- Rarely
- Occasionally
- Sometimes
- Often
- Always

6. I have taken prescription drugs to feel better without having an injury

- Never
- Onetime
- Rarely
- Occasionally
- Sometimes
- Often
- Always

7. I have taken prescription drugs for nonmedical use to perform in my sport

- Never
- Onetime
- Rarely
- Occasionally
- Sometimes
- Often
- Always

8. I have taken painkillers drugs when I was in pain without having a prescription
   - Never
   - Onetime
   - Rarely
   - Occasionally
   - Sometimes
   - Often
   - Always

9. I have taken prescription painkiller drugs to get high

   - Never
   - Onetime
   - Rarely
   - Occasionally
   - Sometimes
   - Often
   - Always

10. I have been offered prescription drugs by other students

   - Never
   - Onetime
   - Rarely
   - Occasionally
   - Sometimes
   - Often
   - Always

11. I have taken someone else's' prescription medication

   - Never
   - Onetime
   - Rarely
   - Occasionally
   - Sometimes
   - Often
   - Always

12. I have purchased prescription drugs from other students

- Never
- Onetime
- Rarely
- Occasionally
- Sometimes
- Often
- Always

13. I have sold prescription drugs to other students

- Never
- Onetime
- Rarely
- Occasionally
- Sometimes
- Often
- Always

14. I have given prescription drugs to other students

- Never
- Onetime
- Rarely
- Occasionally
- Sometimes
- Often
- Always

15. I have been pressured into letting someone else have my prescription medication

- Never
- Onetime
- Rarely
- Occasionally
- Sometimes
- Often
- Always

Section II: Personal Knowledge & Awareness about the use of Prescription Drugs.
Please answer each of the following questions about athletes' use of prescription drugs using the scale below ranging from strongly disagree to strongly agree.

1. I feel I am knowledgeable about prescription drugs

   - Strongly disagree
   - Disagree
   - Neither agree or disagree
   - Agree
   - Strongly agree

2. I feel I am knowledgeable about the side effects of prescription drugs

   - Strongly disagree
   - disagree
   - Neither agree disagree
   - Agree
   - Strongly agree

3. I feel I am knowledgeable about what drugs not to mix with prescription drugs

   - Strongly disagree
   - Disagree
   - Neither agree or disagree
   - Agree
   - Strongly agree

4. I feel I am knowledgeable about how to take my prescription drugs

   - Strongly disagree
   - Disagree
   - Neither agree or disagree
   - Agree
   - Strongly agree

5. I feel knowledgeable about how alcohol affects me when I use prescription drugs

   - Strongly disagree
   - Disagree
   - Neither agree or disagree
   - Agree
   - Strongly agree

6. I feel knowledgeable about the different types of painkillers

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree

7. I feel I am knowledgeable about who to go to ask questions about prescription drug use

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree

8. I know what respiratory depressants are

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree

9. I know what medications affect my central nervous system

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree

10. I am aware of the difference between prescription drug abuse and addiction

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree

Section III: Awareness of the Culture of Prescription Drug Use

Please answer each of the following questions about the culture of prescription drugs use in college athletics. The responses will range from not at all aware to extremely aware.

1. Prescription drugs are easy to get on college campuses

   - o Strongly disagree
   - o Disagree
   - o Neither agree or disagree
   - o Agree
   - o Strongly agree

2. Prescription drugs are as easy to get as alcohol

   o Strongly disagree
   o Disagree
   o Neither agree or disagree
   o Agree
   o Strongly agree

3. Prescription drugs are as easy to get as marijuana

   o Strongly disagree
   o Disagree
   o Neither agree or disagree
   o Agree
   o Strongly agree

4. Using prescription drugs once a week without a doctor's prescription is harmless

   o Strongly disagree
   o Disagree
   o Neither agree or disagree
   o Agree
   o Strongly agree

5. Using prescription drugs daily without a doctor's prescription is harmless

   o Strongly disagree
   o Disagree
   o Neither agree or disagree
   o Agree
   o Strongly agree

6. Prescription drug use on college campuses is a problem

o Strongly disagree
o Disagree
o Neither agree or disagree
o Agree
o Strongly agree

7. Prescription drugs are safer than marijuana

- o Strongly disagree
- o Disagree
- o Neither agree or disagree
- o Agree
- o Strongly agree

8. Prescription drugs are safer than alcohol

- o Strongly disagree
- o Disagree
- o Neither agree or disagree
- o Agree
- o Strongly agree

9. I know students who use prescription drugs at parties

- o Strongly disagree
- o Disagree
- o Neither agree or disagree
- o Agree
- o Strongly agree

10. I know students who use prescription drugs with alcohol

- o Strongly disagree
- o Disagree
- o Neither agree or disagree
- o Agree
- o Strongly agree

11. I know students who use prescription medication with other drugs

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree

12. I know athletes who use other people's medication

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree

13. I know athletes who snort prescription drugs

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree

14. I know athletes who inject prescription drugs

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree

15. Some athletes hide their prescription medication so that no one else will take it

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree

16. Using medications that do not belong to me is not harmful

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree

17. If I am in pain, it is okay to use another persons' medication one time

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree

18. If you have permission from another person, is it okay to use their medication

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree

19. Students believe it's okay to take more medication than prescribed if it helps them resume playing in their sport

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree

20. I know athletes who purchase prescription drugs from other people

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree

Section IV: Demographic Information [A drop box option will be inserted for the answer choices below]

1. What is your classification?

- Freshman
- Sophomore
- Junior
- Senior

2. What is your Gender?

- Male
- Female
- Other

3. What sport do you participate in?

- Football
- Basketball
- Baseball
- Track & Field
- Volleyball
- Soccer
- Gymnastics
- Golf
- Other

4. What is your Race/Ethnicity?

- American Indian or Alaska Native
- Asian
- Black or African American
- Native American or other Pacific Islander
- White
- Latino/Hispanic
- Not Latino or Hispanic
- Other
- Prefer not to answer

5. What is your age? [A drop box option to select an age category will be inserted for this question]

- 18 – 20
- 21-24

6. Do you feel as if there is a need for more education in relation to prescription drug use?

- Yes
- No

7. How important to you is providing more education on prescription drug use?

- Not at all
- Low Important
- Slightly Important
- Moderately Important
- Very important
- Extremely important

College Policy Manual and College Catalog Documents

[redacted] **College Policy Manual 2015-2017**

[redacted] College Policy Manual Vol. II

2.2.2.6 Alcohol and Drug Abuse Prevention and Counseling pg. 35
Programs regarding drug and alcohol abuse are offered by the College on an on-going basis and are open to all members of the college community. Alcohol and drug counseling programs are available to members of the campus community through the college as well. Participation in counseling programs is strictly confidential.

[redacted] College Policy Manual Vol. 5

5.4.9.1 Mental Health Services pg. 15
Services of the [redacted] Mental Health Center are available to all students twice a week. College staff works closely with the staff of the Community Mental Health Center to meet the needs of our students.

5.4.9 Health Services pg. 7
[redacted] College encourages students concerned with health/wellness issues (e.g., asthma, diabetes, hypertension, depression, pregnancy, STD's, etc.) to seek assistance from Health Services.

[redacted] **College 2015-2017 Catalog – Page 66 - 67**

Document 2

[redacted] College Catalog 2015-2017

Mental Health Services pg. 67
College staff works closely with the staff of the Community Mental Health Center to meet the needs of our students. Mental Health Services may be accessed by calling [redacted]. Phone assessments can be completed to determine students need to determine the urgency/need to request or secure an appointment with a social worker and/or psychiatrist.

Document 3

Residential Life Policy

The Office of Residence Life/Housing is the central office for all aspects of residential organization and living. Residential living for students at [redacted] is an experience that

is supportive of learning in the classroom. Students gain self-development by group living; participating in residential government; assisting in formulating and presenting residential, educational, and recreational programs; and independent living. There are five on-campus residences that are staffed by Resident Coordinators, Assistant Residence Coordinators, and Resident Assistants, all of whom work under the guidance of the Director of Housing and Residential Life. In each hall, the residential life staff is responsible for working with students in developing and presenting educational, recreational, social and cultural programs; supervising facilities; and advising/counseling residents.

Housing Reservations All students, except those who commute daily from their homes, are expected to room on the campus when occupancy does not exceed the capacity of the residence halls. Accordingly, each resident student is required to make a room reservation prior to enrollment because there is always a great demand for campus housing. This includes filing with the Cashier's Office the Room Reservation Form and a non-refundable Housing Fee. All students applying for room space on campus must pay this fee.

Students who do not commute from their homes and who have special reasons for living off campus must obtain permission to live off campus from the Office of the Vice President for Student Affairs. Off-campus housing in Denmark is very limited.

For additional information concerning housing, contact the Office of the Director of Residential Life and Student Housing.

Housing Contract Agreement [redacted] requires students to sign a Housing Contract Agreement before occupying space in the residence halls. The student is bound financially by this agreement for one year (two semesters). The contract may be canceled by the College if:

[redacted] 2015-2017 Catalog – Page 63

1. The student is found by the College to be undesirable for residential living, as evidenced by a violation of Residence Hall Rules or the Student Code of Conduct. 2. The student is asked to withdraw for academic, or any other reasons, including but not limited to poor academic performance, academic dishonesty, not attending classes, or health reasons.

The housing contract may be canceled by the student without the loss of a deposit by written notification of his/her intention to move off-campus to the Office of Residential Life and Student Housing prior to July 16 (for one semester) and/or December 10 (for two semesters). A student who fails to give this notice prior to these dates, will be charged for the full semester's board and lodging. STUDENT CONDUCT [redacted] strives to maintain a community that promotes and values the academic experience, institutional and personal integrity, justice, equality, and diversity. The College, therefore, believes in values that foster an environment where people can work, study, and recreate together as a community.

In establishing this community, it is necessary to state behavioral expectations for all students, which promote the College's values. The purpose of the Student Code of Conduct is to outline these behavioral expectations, and to provide an explanation of the process involved for responding to allegations of student misconduct, as well as detailing what actions the College shall take in dealing with policy violations.

A student attending [redacted] agrees to be governed by the Student Code of Conduct, as well as other College policies. The Student Code of Conduct applies to each student who is enrolled, whether on campus or off, during sessions, or between semesters. The College, through the Office of Student Affairs, maintains the exclusive authority to impose sanctions for behaviors that violate the Student Code of Conduct, with the exception of an alleged violation of academic dishonesty. The Office of the Academic Affairs imposes sanctions for violations of academic dishonesty.

The purpose of publishing disciplinary regulations is to give students general notice of prohibited behavior. This code is not written with the specificity of a criminal statute. These regulations should be read broadly and are not designed to define prohibited behavior in exhaustive terms.

All students at [redacted] have access to the Student Code of Conduct. This document appears in its entirety on the Student Affairs link on the [redacted] home page at http://www.voorhees.edu/. In addition, limited hard copies of the Student Code of Conduct are available in each residence hall staff office, the Office of Student Affairs, Student Engagement, and the Student Government Association.

All students are responsible for reading Volume V (Student Life) of the [redacted] Policy

[redacted] 2015-2017 Catalog – Page 64

Manual. Each student is also expected to know and observe all values and behavioral related to the Student Code of Conduct, and to be familiar with the information contained in all College publications.

[redacted] is committed to providing fair and equitable treatment to all students in student disciplinary matters. It also has an equal obligation to protect its educational purpose and the interest of its student body; therefore, it must be concerned with the actions of individuals or groups that are in conflict with the welfare and integrity of the College or in disregard for the rights of other students, faculty or other members of the College community. All students, while associated with or representing the College, are expected to conduct themselves and community life in a manner that will reflect favorably upon the College. When students enter [redacted], it is assumed that they have a serious purpose and a sincere interest in their own social and intellectual development.

It is also assumed that they are familiar with the policies and regulations set forth for at [redacted], and that they have accepted them as a way of life during their stay at the College. They are expected to learn to handle problems intelligently, reasonably and with consideration for the rights of others; to obey laws and ordinances of the nation, state, and community of which they, as well as the College, are a part; and to conduct themselves peaceably in espousing changes they may consider necessary. **SUBSTANCE ABUSE AND TOBACCO-FREE CAMPUS POLICIES In accordance with the College's Alcohol and Drug Policy** (see Volume II, Subsection 2.2.2 of the Policy and Procedures Manual), [redacted] students are prohibited from using, possessing, manufacturing, dispensing, distributing or being under the influence of alcohol, controlled substances or illegal drugs on College-owned property, at College-sponsored activities, or while attending off-campus events as an official representative of the College.

In accordance with its Healthy Campus Initiative, [redacted] is dedicated to providing a healthful, comfortable, and productive work and study environment for all faculty, staff and students. [redacted] sought to become an entirely tobacco-free campus, effective September 1, 2013. At its May, 2013 Board of Trustees Meeting, the Trustees approved the implementation of a Tobacco-Free Campus Policy.

As reported by the Environmental Protection Agency (EPA), second-hand smoke (SHS) is responsible for an estimated 53,000 deaths per year in non-smokers. In addition, the United States Surgeon General's 1986 report, The Health Consequences of Involuntary Smoking, concluded the following: involuntary smoking is a cause of disease, including lung cancer, in healthy non-smokers.

The simple separation of smokers and non-smokers within the same air space may reduce, but does not eliminate, the exposure of the non-smoker to SHS.

The primary goal of this policy is to provide a 100% tobacco-free, smoke-free environment for

[redacted] 2015-2017 Catalog – Page 65

All students, faculty, staff and visitors within all campus facilities (including residence halls), vehicles, and grounds and at all sponsored events.

This goal will be achieved by: • Modeling healthy behavior for all students, faculty, staff, visitors and the entire college community • Utilizing tobacco use prevention awareness and education programming and materials, and • Providing access to cessation counseling and/or referral services for all students, faculty, and staff.

To maintain a tobacco-free campus, [redacted] has implemented several new actions. The use of all tobacco products and/or paraphernalia is prohibited. This includes but is not limited to, cigarettes, cigars, pipes, smokeless tobacco and tobacco products, and devices and substances containing tobacco by-products (e.g., e-cigarettes). Smoking is prohibited within business-

owned, college-owned, or leased vehicles, or in buildings and on the grounds. This applies to offices, hallways, waiting rooms, restrooms, lunchrooms, elevators, meeting rooms, community areas, and all grounds and property of [redacted]. [redacted] will not accept any contributions or gifts, money or materials from the tobacco industry. The College will not participate in any type of services funded by the tobacco industry. In addition, any gear, paraphernalia, clothing, etc., that advertises tobacco use or tobacco products will not be allowed on campus grounds or in the possession of students, faculty or staff at school sponsored events. This policy applies to all faculty, staff, students, clients, contractors, and visitors.

Appendix III: Institutional Review Board Documents

UTK IRB Letter-Study Approval

THE UNIVERSITY of TENNESSEE
KNOXVILLE
Office of Research & Engagement
INSTITUTIONAL REVIEW BOARD (IRB)

1534 White Ave.
Knoxville, TN 37996-1529
865-974-7697
fax 865-974-7400

December 05, 2016

Marcus L Amos,
UTK - Kinesiology Recreation & Sport Studies

Re: UTK IRB-16-03218-FB
Study Title: A Knowledge Assessment of Prescription Drug Use Among Student-Athletes at a College in the Southeast

Dear Marcus Amos:

The IRB has received your written acceptance of and/or response to the provisos outlined in our previous correspondence concerning the application for the above referenced project, reviewed by the IRB at its December 1, 2016 meeting. The IRB has reviewed these materials and determined that they comply with proper consideration for the rights and welfare of human subjects and the regulatory requirements for the protection of human subjects.

Therefore, this letter constitutes full approval by the IRB of your application (version 1.4) and these accompanying forms that have been dated and stamped IRB-approved:

- Recruitment email for student athletes v 2.0
- Marcus Amos Research Survey Questions for Student Athletes 1 v1.0
- Marcus Amos Interview Questions for Athletic Director and Coaches 1 v2.0
- Marcus Amos Informed Consent Form for Athletic Dir and Coaches 103116 v1.0
- Online E Survey form for Student Athletes 10/31/16 v 1.1 (student consent statement)

Approval of this study will be valid from December 05, 2016 to 11/30/2017. In the event that subjects are to be recruited using solicitation materials, such as brochures, posters, web-based advertisements, etc., these materials must receive prior approval of the IRB. Any revisions in the approved application must also be submitted to and approved by the IRB prior to implementation. In addition, you are responsible for reporting any unanticipated serious adverse events or other problems involving risks to subjects or others in the manner required by the local IRB policy.

Finally, **re-approval** of your project is required by the IRB in accord with the conditions specified above. You may not continue the research study beyond the time or other limits specified unless you obtain prior written approval of the IRB.

Sincerely,

Colleen P. Gilrane

Colleen P. Gilrane,
Ph.D. Chair

Research Site IRB Approval Letter

_____ College

Office of Vice President for Planning
[redacted]

March 1, 2016

Supporting Department:
[redacted]
Institutional Review Board

Attn: University of Tennessee Institutional Review Board;

Please accept this letter of support confirming that [redacted] has agreed to allow Mr. Marcus Amos to conduct his research study on our campus involving human subjects. [redacted] College's IRB reviewed Mr. Amos's request to conduct quantitative methods (surveys) and qualitative methods (Interviews with coaches & athletic director / Document reviews related to student-athlete welfare & health related services within the athletic department), focused on assessing prescription drug use among student-athletes. [redacted] College will allow Mr. Amos to administer his survey to our student-athletes and conduct any interviews with athletic staff as needed to complete the research study.

We feel confident that the research study will be valuable to institutions in their effective implementation of preventive programs for student-athletes.

We fully support Mr. Amos' request throughout the completion of his research project and if we can provide you with any additional information, please do not hesitate to contact me.

Sincerely,

[redacted]
Vice President for Planning
Internal Review Board

IORG# 0008343

Research Site Athletic Department Support Letter

Department of Intercollegiate Athletics
[redacted]

May 13, 2016

ATTN: University of Tennessee Institutional Review Board:

I am forwarding this letter of support from the Department Of Intercollegiate Athletics verifying that [redacted] College is in approval of Marcus Amos conducting his research study which will require quantitative methods (surveys) and qualitative methods (Interviews with coaches and athletic director/Documented reviews related to student-athletes welfare & health related services within the athletics department).

[redacted] College Department of Intercollegiate Athletics is confident that this research study which will be administered will not violate any privacy issues, while maintaining strict confidentiality of our student athletes and athletics staff.

If you have questions, please contact me at your convenience.

Sincerely,

[redacted]

[redacted]
Special Assistant to the President/
Director of Athletics

[redacted]

VITA

Marcus Amos studies addiction and abuse in sports from a sport management perspective, specifically focused on athletes and illicit prescription drug abuse. Amos studies the prevalence of prescription drug use, and preventive measures that will assist athletic programs in addressing this problem. Implementing effective prescription drug monitoring programs has been a targeted concern since he began focusing on this topic. He also has conducted a pilot study related to awareness of prescription drug use by athletic staff, and the awareness of prescription drug use by student-athletes. In addition to studying drug abuse, Amos researches life-skill areas that affect athletes during and after the athletic playing careers related to domestic violence, anger management, and career development & transition.

As a doctoral student, Amos served as a volunteer guest speaker and lecturer in coursers related to intercollegiate athletics and sport management at the University of Tennessee. After completing his course work at the University of Tennessee, Amos continued his academic profession as an Assistant Professor of Sport Management and Department Coordinator at Voorhees College. Amos also served as a volunteer graduate assistant at the University of New Mexico within the sport administration department.

Marcus Amos has transitioned rehabilitative services to direct care needed in the area of sport management. Direct services and treatment in the area of social skills development has required Amos to obtain professional credentials as a Licensed Substance Abuse Associate, Certified Alcohol & Drug Counselor, Certified Life-Skills Facilitator, Certified Domestic

Violence Counselor, Certified Anger Resolution Therapist, and Certified Bereavement & Trauma Counselor.

Marcus Amos has devoted valuable time in providing support and guidance, volunteering within college male initiative programs, and community organizations. In addition to his community efforts, he has provided expert consultation to several media outlets related to issues of prescription drug use in sports. Some of these media integers include HBO Reals Sports, ESPN, ABC News, NFL Radio, and 60 Minutes. Amos also played pedicel role in *"Locker-Room Addiction"*, produced by Direct TV. A documentary based on the prevalence and culture of prescription drug use within athletics. Amos was the recipient of the Graduate Scholar Award as he presented his research in Rio de Janeiro Brazil at the Sport & Society Conference. His topic was "Developing Preventive Drug Monitoring Programs: Athletes dying from prescription drug overdose."